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FINAL REPORT  
MISSOURI RIVER ENVIRONMENTAL INVENTORY  
**1973**

VERTEBRATE SECTION  
BIRDS

by  
JAMES LYNK  
under the direction of  
DR. BYRON HARRELL

BIRDS ALONG THE MISSOURI RIVER FROM GAVIN'S POINT DAM TO  
RULO, NEBRASKA WITH SPECIAL REFERENCE TO THE EFFECTS OF  
CHANNELIZATION ON BREEDING BIRDS.

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## A. GAVIIFORMES

## 1. Gaviidae

1. Common Loon, Gavia immer, Spr., Fall migr.  
 Spring - last of March to Union Co. - uncommon  
 Migr. end of April De Soto NWR - occasional  
 Fall - Sept & Oct. Sq. C. NWR - rare  
 Migr.

## B. PODICIPEDIFORMES

## 1. Podicipedidae

2. Red-necked Grebe, Podiceps grisegena, (formerly Holboell's Grebe)  
 Spr., Fall migr.  
 Spr. migr. - early March  
 Fall migr. - mid-October
3. Horned Grebe, Podiceps auritus, Spr., Fall migr.  
 Spring - April 19 De Soto NWR - rare  
 Fall - last seen Nov. 11 Sq. C. NWR - occasional  
 A 5/11 1
4. Eared Grebe, Podiceps caspicus, breeds in N., Spr., Fall migr. in S.  
 Spring - end of April De Soto NWR - rare  
 Fall - Sept. 22 to Nov. 2 Sq. C. NWR - occasional  
 Egg dates - April 29 to July 23  
 Bent - Breeds in densely populated colonies in shallow, marshy  
 lakes, in open situations.
5. Western Grebe, Aechmophorus occidentalis, Spr., Fall migr.  
 Spring - early May Union Co. - casual spring visitor  
 Fall - October De Soto NWR - rare  
 Yankton, S.D. 27/10 1
6. Pied-billed Grebe, Podilymbus podiceps, breeds throughout; winters south  
 of ice.  
 Spring - March to mid-April Union Co. - tolerably common  
 Fall - Starting southward in De Soto NWR - uncommon  
 Sept. Sq. C. NWR - common  
 Bent - Nest, in small, scattered colonies, nests well-hidden, on  
 small mounds just above the waterline, or floating if in  
 deep water.

G 6/9 5  
 G 8/9 9  
 G 11/9 30  
 M 17/9 11  
 F 17/9 24

## C. PELECANIFORMES

## 1. Pelecanidae

7. White Pelican, Pelecanus erythrorhynchos, Spr., Fall migr.  
 Spr. Ar. - March 18 Union Co. - regular  
 Fall Ar. - Sept. 13 De Soto NWR - uncommon  
 Sq. C. NWR - abundant  
 W 4/10 28

2. Phalacrocoracidae

8. Double-crested Cormorant, Phalacrocorax auritus, Breeds near northern part of area; Spr., Fall migr. elsewhere.  
 Spr. Ar. - March 1-7 Union Co. - tolerably common  
 Spr. Dep - May 22 De Soto NWR - common  
 Fall Ar. - Oct. 5 Sq. C. NWR - common  
 Fall Dep - Nov. 20  
 Bent - Known to breed at Stump Neck, N.D. Used to rest in trees with great Blue Herons in colonies.
- |                  |          |    |
|------------------|----------|----|
|                  | W 15/9   | 4  |
| Yankton, S.D.    | 27/9     | 3  |
| Elk Point, S.D.  | 27/9     | 1  |
| Yankton, S.D.    | 11/10    | 70 |
| Elk Is., S.D.    | 11/10    | 4  |
|                  | (W 23/10 | 7) |
| Yankton, S.D.    | 25/10    | 55 |
| Burbank L., S.D. | 10/5     | 2  |

D. CICONIIFORMES

1. Ardeidae

9. Great Blue Heron, Ardea herodias, winter resident to S.; Breeds throughout.  
 Spr. Ar. - late March Union Co. - common and regular  
 Fall Dep - early October  
 Egg dates - April 19 to May 9  
 Bent - Group nesting in low trees in isolated area.
- |                |         |    |
|----------------|---------|----|
|                | W 14/9  | 1  |
| Yankton, S.D.  | 27/9    | 7  |
| Elk Is., S.D.  | 27/9    | 7  |
|                | W 27/9  | 7  |
|                | A 27/9  | 7  |
| Elk Pt., S.D.  | 27/9    | 10 |
| Yankton, S.D.  | 11/10   | 21 |
| Elk Is., S.D.  | 11/10   | 9  |
|                | W 11/10 | 4  |
| Elk Is., S.D.  | 25/10   | 6  |
| Browns L., Ia. | 15/6    | 20 |
| Sq. C. NWR     | 24/5    | 1  |
| Sq. C. NWR     | 26/5    | 3  |
10. Green Heron, Butorides virescens, common breeder throughout.  
 Spr. Ar. - late April Union Co. - tolerably common  
 Fall Dep. - Sept. 24 De Soto NWR - uncommon  
 Egg Dates - May 12 to June 18 Sq. C. NWR - common  
 Bent - nests singly or in colonies, in woods or marshes. Tame.

11. Little Blue Heron, Florida caerulea, occ. extends after breeding season through area; breeds S. of area.  
 In South of area in June Sq. C. NWR - common  
 and Aug.  
 Egg Dates - April 17 to May 16  
 Bent - Nests on willow islands in rivers.  
 Sq. C. NWR 24/5 1
12. Cattle Egret, Bubulcus ibis, occ. extends summer range to area.
13. Common Egret, Casmerodius albus, breeds throughout.  
 Spr. arr. - May 2 Union Co. - casual late summer visitor  
 Egg Dates - April 4 to May 20 De Soto NWR - occasional  
 Sq. C. NWR - common  
 Bent - nests in willow swamps  
 Sq. C. NWR 24/5 1
14. Snowy Egret, Leucophoyx thula, occ. extends (after breeding season) summer range to area, breeds south of area  
 Egg Dates - April 29 to June 12 Sq. C. NWR - occasional
15. Black-crowned Night Heron, Nycticorax nycticorax, breeds throughout.  
 Spr. arr. - April 17 Union Co. - regular  
 Fall dep. - Nov. 20 De Soto NWR - rare  
 Egg Dates - April 10 to June 12 Sq. C. NWR - common  
 Bent - Nest in colonies; 3-5 nests per tree, in dry scrub-oak woods; a few nest in marshes.  
 Burbank L. 10/6 3  
 Sq. C. NWR 24-5 1  
 Sq. C. NWR 25/4 3
16. Yellow-crowned Night Heron, Nyctanassa violacea, occ. extends after breeding season to area, breeds to south.  
 Egg Dates - April 13 to May 23 Sq. C. NWR - occasional
17. Least Bittern, Ixobrychus exilis, breeds throughout.  
 Spr. arr. - May 11 Union Co. - uncommon  
 Fall dep. - Oct. 8 Sq. C. NWR - occasional  
 Egg Dates - May 22 to July 10  
 Bent - Nests deep within marshes, in Typha or Sagittaria.
18. American Bittern, Botaurus lentiginosus, breeds throughout.  
 Spr. arr. - March 21 Union Co. - common  
 Fall dep. - Nov. 10 De Soto NWR - occasional  
 Egg Dates - June 5 to July 21 Sq. C. NWR - uncommon  
 Bent - solitary; Nests in Typha + Scurpus  
 Burbank L. 10/6 1
19. White-faced Ibis, Flegadis chihi, fall migr.  
 Fall arr. - early October Sq. C. NWR - rare

## E. ANSERIFORMES

## 1. Anatidae

20. Whistling Swan Olor columbianus, Spr., Fall migr.  
 Spr. arr. - March 31 Union Co. - rare  
 Fall arr. - Late October De Soto NWR - rare  
 Sq. C. NWR - rare
21. Canada Goose, Branta canadensis, Spr., Fall migr.  
 Spr. arr. - Feb. 4 Union Co. - regular  
 Fall arr. - Sept. 7 De Soto NWR - abundant  
 Sq. C. NWR - abundant
- |                  |   |
|------------------|---|
| Vermillion, S.D. | 27/9 flock of Snows with<br>1 Canada          |
| Vermillion, S.D. | 1/10 flock Leord 2232 & 2330<br>(medium size) |
| Vermillion, S.D. | 3/10 large flock Leord                        |
| :                | W 4/10 1                                      |
|                  | M 8/10  |
|                  | W 16/10 1                                     |
|                  | A 2/11 6                                      |
| Elair            | 24/11 5                                       |
| Neb. City        | 24/11 30                                      |
|                  | A 30/11 3                                     |
| Vermillion, S.D. | 3/5 25  |
22. Brant, Branta bernicla  
 Spr. arr. - Feb. 15 De Soto NWR - rare  
 Fall arr. - Sept. 8
23. White-fronted Goose, Anser albifrons, Spr., Fall migr.  
 Spr. migr. - late April to Union Co. - usually not common  
 early May De Soto NWR - common  
 Fall migr. - late Sept. to Sq. C. NWR - common  
 early Oct.
24. Snow Goose, Chen hyperborea, Spr., Fall migr.  
 Spring arr. - March 28 Union Co. - abundant in spring,  
 less so in fall  
 De Soto NWR - abundant  
 Sq. C. NWR - abundant
- |                  |   |
|------------------|---|
| Vermillion, S.D. | 27/9 flock of 14 Snows<br>(including 1 Canada)                                    |
|                  | M 8/10 8  |
|                  | M 10/10 1   |
|                  | M 11/10 7   |
|                  | W 13/10 4   |
|                  | M 14/10 6   |
| Burbank L., S.D. | 4/11 6 flights of Snow Geese,<br>at 100 each, total 650,<br>NE to SW, medium low. |



	A 5/11	40
Vermillion, S.D.	12/11	50
Yankton, S.D.	24/11	2
Sioux City	24/11	1200
Blair, Neb.	24/11	1300
Neb. City	24/11	1500
	W 29/11	35
Sq. C. NWR	24/5	2
Sq. C. NWR	25/5	2

25. Ross' Goose, Chen rossii, normally western. Rare visitant.  
 Spring - early April De Soto NWR - rare  
 Fall - late Oct.

26. Mallard, Anas platyrhynchos, summer resid. in N., year round in central, winter resid. in South  
 Spring arr. - Feb. 24 Union Co. - common or abundant  
 Fall arr. - Nov. 15 De Soto NWR - abundant  
 Egg Dates - April 29 to July 6 Sq. C. NWR - abundant  
 Bent - Nests on ground in almost dry edge of a marsh.

	G 2/9	1
	W 22/9	1
	M 11/10	4
	M 14/10	2
	M 15/10	50
	W 16/10	1
	W 23/10	7
Yankton, S.D.	25/10	12
	W 25/10	2
Elk Is., S.D.	25/10	3
	G 26/10	20
	A 2/11	46
	A 3/11	15
	A 5/11	48
Yankton, S.D.	24/11	26
Sioux City	24/11	150
Blair	24/11	235
Neb. City	24/11	400
Rulo	24/11	200
	W 29/11	15
	A 30/11	4
Omaha	Xmas	451
Yankton, S.D.	Xmas	170
Sioux City	Xmas	50
	G 26/3	21
	M 10/4	2
Burbank L., S.D.	10/6	2
Sq. C. NWR	23/5	5
Sq. C. NWR	24/5	2
Sq. C. NWR	25/5	92
Burbank L., S.D.	1/6	2

27. Black duck, Anas rubripes, Spr., Fall migr.  
 Spr. migr. - late April to mid March Union Co. - uncommon to rare  
 De Soto NWR - common  
 Fall migr. - Mid Nov. Sq. C. NWR - common  
 Yankton, S.D. Xmas 2
28. Gadwall, Anas strepera, Spr., Fall migr.  
 Spr. arr. - March 10 Union Co. - regular and tolerably  
 common  
 De Soto NWR - common  
 Sq. C. NWR - common  
 M 10/10 1  
 W 13/10 3  
 M 14/10 3  
 A 16/10 28  
 M 20/10 21  
 W 25/10 2  
 G 5/11 63  
 Yankton, S.D. 21/3 5  
 Sq. C. NWR 25/5 1
29. Pintail, Anas acuta, breeds throughout  
 Spr. arr. - Feb. 18 Union Co. - abundant migrant  
 Egg Dates - May 11 to June 27 De Soto NWR - abundant  
 Sq. C. NWR - abundant  
 Bent - nest in low grass near edge of pond or slough.  
 F 17/9 2  
 A 16/10 3  
 Yankton, S.D. 25/10 6  
 G 26/3 48  
 M 10/4 9  
 Sq. C. NWR 23/5 3  
 Sq. C. NWR 24/5 1  
 Sq. C. NWR 25/5 1
30. Green-winged Teal, Anas carolinensis, breeds in N.; Spr.,  
 Fall migr. elsewhere.  
 Spring arr. - March 20 Union Co. - regular migrant  
 Fall arr. - Nov. 27 De Soto NWR - common  
 Sq. C. NWR - common  
 Bent - nest in a hollow in dry ground a considerable  
 distance from the lake or slough (early nester).  
 G 2/9 10  
 M 10/10 1  
 M 10/4 2  
 M 18/4 2
31. Blue-winged Teal, Anas discors, breeds throughout.  
 Spring arr. - March 18 Union Co. - common  
 Fall dep. - Nov. 4 De Soto NWR - abundant  
 Egg Dates - May 8 to July 23 Sq. C. NWR - common  
 Bent - nest in dry grass near ponds or sloughs (late nesters).

	G 2/9	15
	G 6/9	19
	G 8/9	45
	G 11/9	100
	W 15/9	20
	M 17/9	3
	F 17/9	8
	W 27/9	3
Elk Is., S.D.	27/9	3
	M 9/10	2
	W 13/10	5
	A 2/11	69
	M 18/4	1
Burbank L., S.D.	10/6	12
Browns L., Ia.	15/6	4
Sq. C. NWR	23/5	6
Sq. C. NWR	24/5	2
Sq. C. NWR	25/5	1
Burbank L., S.D.	1/6	6

32. Cinnamon Teal, Anas cyanoptera, Spr., Fall migr. to S.  
 Spr. arr. - April 10 Union Co. - casual  
 Fall migr.- Sept. to Mid Oct. Sq. C. NWR - rare
33. European Widgeon, Mareca penelope, rare, Fall migr.  
 Bent - Interior U.S. records mostly in Spring--March,  
 April
34. American Widgeon, Mareca americana, Spr., Fall migr.  
 Spring arr. - March 15 Union Co. - common in Spr., seems  
 Fall dep. - Nov. 18 less common in Fall  
 De Soto NWR - abundant  
 Sq. C. NWR - common  
 M 17/9 8  
 F 17/9 11  
 M 11/10 2  
 M 14/10 1  
 M 15/10 15  
 M 20/10 3  
 Yankton, S.D. 21/3 2  
 G 26/3 13  
 M 10/4 104  
 M 18/4 150  
 Burbank L., S.D. 1/6 2
35. Shoveler, Spatula clypeata, breeds in N.; Spr., Fall migr.  
 elsewhere.  
 Spr. arr. - March 23 Union Co. - tolerably common  
 Egg Dates - May 9 to July 3 migrant  
 De Soto NWR - common  
 Sq. C. NWR - common

Bent - nests in dry grass near ponds or sloughs (late nester).

	G 2/9	2
	G 6/9	8
	G 8/9	8
	G 11/9	30
	M 9/10	4
	M 11/10	8
	M 17/10	3
Yankton, S.D.	25/10	4
	G 26/3	9
	M 10/4	109
	M 18/4	20
Sq. C. NWR	24/5	1
Sq. C. NWR	25/5	1

36. Wood Duck, Aix sponsa, breeds throughout.

Spring arr. - March 7	De Soto NWR - common
Fall dep. - Nov. 9	Sq. C. NWR - common
Egg Dates - April 17 to June 4	

Bent - Always nest in hollows in trees, natural or old flicker or squirrel hole. Not necessarily near water.

	G 2/9	2
	W 7/10	1
Browns L., Ia.	15/6	4

37. Redhead, Aythya americana, breeds in N.; Spr., Fall migr. elsewhere.

Spring arr. - March 8	Union Co. - rather uncommon
Fall arr. - Oct. 6	spring migrant
Egg Dates - May 18 to June 28	De Soto NWR - occasional
	Sq. C. NWR - occasional

	M 17/9	5
	F 17/9	3
	M 15/10	3
	G 26/3	41
	M 29/3	20
Sq. C. NWR	24/5	1
Sq. C. NWR	25/5	2

38. Ring-necked Duck, Aythya collaris, Spr., Fall migr.

Spr. arr. - March 14	Union Co. - in small numbers
Fall arr. - Nov. 22	De Soto NWR - common
	Sq. C. NWR - occasional

	A 16/10	1
	A 3/11	12
	G 26/3	31
	M 29/3	60
	M 10/4	92

39. Canvasback, Aythya valisineria, Spr., Fall migr.  
 Spring arr. - March 12 Union Co. - in small numbers  
 Fall dep. - Nov. 27 De Soto NWR - occasional  
 Sq. C. NWR - uncommon  
 M 11/10 1  
 W 13/10 25  
 W 16/10 6  
 G 26/3 3  
 M 29/3 20  
 M 10/4 14  
 Sq. C. NWR 24/5 1
40. Greater Scaup, Aythya marila, Spr., Fall migr.  
 Spr. arr. - March 6 De Soto NWR - rare  
 Fall arr. - Nov. 27 Sq. C. NWR - rare
41. Lesser Scaup, Aythya affinis, Spr., Fall migr.  
 Spring arr. - Feb. 21 Union Co. - abundant Spring  
 Fall dep. - Dec. 2 migrant, present in  
 small numbers in the  
 Fall  
 De Soto NWR - common  
 Sq. C. NWR - common  
 M 20/10 6  
 A 3/11 40  
 M 10/4 95  
 M 18/4 41
42. Common Goldeneye, Bucephala clangula, winter resident.  
 Spring arr. - March 14 Union Co. - Spr., Fall migrant  
 Fall arr. - Nov. 24 in limited numbers  
 De Soto NWR - uncommon  
 Sq. C. NWR - uncommon  
 A 16/10 7  
 Yankton, S.D. Xmas 1
43. Bufflehead, Bucephala albeola, Spr., Fall migr. in N., winter  
 resid. in S.  
 Spring arr. (avg.) - March 15 Union Co. - small numbers  
 De Soto NWR - common  
 Sq. C. NWR - uncommon  
 M 15/10 3  
 A 3/11 7  
 M 18/4 1
44. Old Squaw, Clangula hyemalis, occasionally in winter in study  
 area; normally Great Lakes.  
 Union Co. - rare late Fall visitor  
 De Soto NWR - rare

45. White-winged Scoter, Melanitta deglandi, Spr., Fall migr.  
normally Great Lakes  
Spring arr. - April 5 Union Co. - casual Fall visitor  
Fall dep. - Oct. 11 De Soto NWR - rare  
Sq. C. NWR - rare
46. Ruddy Duck, Oxyura jamaicensis, breeds N.; Spr., Fall migr.  
elsewhere.  
Spr. arr. - April 7 Union Co. - regular migrant in  
Egg Dates - June 8 to July 19 small numbers  
De Soto NWR - occasional  
Sq. C. NWR - occasional  
Bent - nests in deep-water sloughs amongst tall bulrushes,  
in knee deep water  
Elk Is., S.D. 25/10 4  
G 26/3 4
47. Hooded Merganser, Lophodytes cucullatus, breeds throughout-  
Spr. arr. - March 5 Union Co. - regular Spr., Fall  
Fall dep. - Nov. 26 migration  
Egg Dates - June 5 to June 13 De Soto NWR - uncommon  
Sq. C. NWR - uncommon  
Bent - nest in natural cavities at any height in heavily  
wooded bottoms or flooded woodlands (assoc. with  
Wood Duck).
48. Common Merganser, Mergus merganser, winter resident.  
Spring arr. (avg.) - March 28 Union Co. - tolerably common  
De Soto NWR - common  
Sq. C. NWR - uncommon  
A 16/10 8  
Omaha Xmas 3  
Yankton, S.D. Xmas 1  
Sioux City Xmas 4  
M 29/3 20
49. Red-breasted Merganser, Mergus serrator, Spr., Fall migr.  
Spring dep. - May 4 Sq. C. NWR - occasional  
M 29/3 4

## F. FALCONIFORMES

## 1. Cathartidae

50. Turkey Vulture, Cathartes aura, breeds throughout  
Spr. arr. - Feb. 7 Union Co. - uncommon  
Fall dep. - Nov. 7 De Soto NWR - uncommon  
Egg Dates - April 16 to June 13 Sq. C. NWR - common  
Bent - Wherever a protected place can be found--on  
precipitous cliffs, in caves, on top of tall  
dead stumps, eggs are laid without a nest. They  
spend the night in a communal roost when not  
nesting.

## 2. Accipitridae

51. Goshawk, Accipiter gentilis, winters.  
 winters October through March Union Co. - casual  
 De Soto NWR - rare  
 Sq. C. NWR - rare  
 Yankton, S.D. 11/10 1  
 Omaha Xmas 1  
 St. Joseph Xmas 1  
 Yankton, S.D. Xmas 2
52. Sharp-shinned Hawk, Accipiter striatus, breeds in N., year-round elsewhere.  
 Spr. migr. - March-April Union Co. - tolerably common  
 Fall migr. - follows sparrows and warblers south De Soto NWR - occasional  
 and warblers south Sq. C. NWR - uncommon  
 Aug. - Sept.  
 Egg Dates - April 11 to June 22  
 Bent - Nests atop evergreens in dense groups, near open country.  
 W 15/9 1  
 Omaha Xmas 1
53. Cooper's Hawk, Accipiter cooperii, breeds in N., year-round elsewhere.  
 Spr. migr. - March-April Union Co. - uncommon  
 Fall migr. - early Oct. De Soto NWR - uncommon  
 Egg Dates - Apr. 26 to June 21 Sq. C. NWR - occasional  
 Bent - Nests on top of Pine trees, oaks, or chestnuts.  
 often migrates with Sharp-shinned  
 Omaha Xmas 2  
 A 18/5 1
54. Red-tailed Hawk, Buteo jamaicensis, year-round.  
 Egg Dates - March 6 to June 30 Union Co. - regular  
 De Soto NWR - common  
 Sq. C. NWR - common  
 Bent - Nest often in the same place, in white pines or oaks. Prefers more open country.  
 W 22/9 1  
 W 27/9 1  
 Elk Is., S.D. 27/9 1  
 Omaha Xmas 19  
 St. Joseph Xmas 18  
 Yankton, S.D. Xmas 1  
 Sioux City Xmas 6  
 Yankton, S.D. 21/3 1  
 A 17/3 1
55. Harlan's Hawk, Buteo harlani, Spr., Fall migr.  
 Spr. migr. - throughout April Sq. C. NWR - uncommon  
 Fall migr. - Sept. 28 to Nov. 20

56. Red-shouldered Hawk, Buteo lineatus, breeds in N., year-round elsewhere.  
 Spr. arr. - March 16 De Soto NWR - occasional  
 Fall dep. - Nov. 14 Sq. C. NWR - occasional  
 Egg Dates - March 13 to June 21  
 Bent - Prefers scattered woodlands, hardwoods. Loyal to a certain nesting territory; nests in the main fork of a large tree.
57. Broad-winged Hawk, Buteo platypterus, breeds throughout.  
 Spr. arr. - March 27 Union Co. - uncommon  
 Fall dep. - Oct. 13 Sq. C. NWR - uncommon  
 Egg Dates - May 15 to June 27  
 Bent - Prefer deep dense and extensive forests, usually hardwood, far from civilization. Nest mainly in oak or white pine at moderate height.
58. Swainson's Hawk, Buteo swainsoni, breeds throughout.  
 Spr. arr. - April 4 Sq. C. NWR - occasional  
 Fall dep. - Oct. 12  
 Egg Dates - May 10 to July 14  
 Bent - In open spaces (prairies and plains) nest in timber belts near small streams often in cottonwood and willows, often in small trees; mostly 20 ft. above ground.
59. Rough-legged Hawk, Buteo lagopus, winters throughout.  
 Fall arr. - Sept. 9 Union Co. - regular  
 Spr. dep. - March 17 De Soto NWR - occasional  
 Sq. C. NWR - common  
 Omaha Xmas 3  
 Yankton, S.D. Xmas 1
60. Golden Eagle, Aquila chrysaetos, winter resid.  
 southward movement during Union Co. - casual  
 winter is caused by food De Soto NWR - rare  
 availability and not a migra- Sq. C. NWR - rare  
 tion with regular dates.
61. Bald Eagle, Haliaeetus leucocephalus, winter resident.  
 Union Co. - casual  
 De Soto NWR - abundant  
 Sq. C. NWR - common  
 Near Offit AFB 24/11 1  
 W 29/11 2  
 W 3/12 2  
 Omaha Xmas 1  
 Yankton, S.D. Xmas 1  
 Sioux City Xmas 16



62. Marsh Hawk, Circus cyaneus, year-round resident throughout.  
 Egg Dates - April 6 to June 30 Union Co. - common  
 De Soto NWR - uncommon  
 Sq. C. NWR - common  
 Bent - Prefers sloughs and wet meadows, but often found  
 in upland prairies and grassy meadows, nests  
 usually in the swamps above water or at the edge;  
 sometimes on dry land near grassy meadows.  
 W 25/10 1  
 Omaha Xmas 2  
 Yankton, S.D. Xmas 1

## 3. Pandionidae

63. Osprey, Pandion haliaetus, Spr., Fall migr.  
 Spr. arr. - March 19 Union Co. - regular  
 Fall dep. - Nov. 12 De Soto NWR - uncommon  
 Sq. C. NWR - uncommon

## 4. Falconidae

64. Prairie Falcon, Falco mexicanus, casual winter, normally  
 western.  
 Union Co. - casual  
 Sq. C. NWR - rare
65. Peregrine Falcon, Falco peregrinus, Spr., Fall migr.  
 Union Co. - casual  
 De Soto NWR - rare  
 Sq. C. NWR - occasional
66. Pigeon Hawk, Falco columbarius, Spr., Fall migr.  
 Union Co. - casual  
 Sq. C. NWR - rare
67. Sparrow Hawk, Falco sparverius, breeds in N. sometimes in  
 winter, year-round resid. elsewhere.  
 Union Co. - abundant migrant,  
 occasional breeder  
 De Soto NWR - occasional  
 Sq. C. NWR - uncommon  
 Omaha Xmas 17  
 St. Joseph Xmas 9  
 Sioux City Xmas 3

## G. GALLIFORMES

## 2. Tetraonidae

68. Ruffed Grouse, Bonasa umbellus, formerly year-round in S.  
Egg Dates - April 28 to June 4  
Bent - on ground in thick deciduous woods

69. Greater Prairie Chicken, Tympanuchus cupido, formerly year-round throughout.  
Egg Dates - April 20 to June 6 Union Co. - two seen 1950  
Bent - nests on ground,

### 3. Phasianidae

70. Bobwhite, Colinus virginianus, year-round throughout  
Egg Dates - April 28 to Oct. 16 Union Co. - small numbers  
De Soto NWR - abundant  
Sq. C. NWR - common  
Bent- nest along fence-rows, in brushy field corners,  
brush piles, wood edges.

Omaha	Xmas	23
St. Joseph	Xmas	28
Sioux City	Xmas	9
	A 5/4	2
Sq. C. NWR	23/5	4
Sq. C. NWR	25/5	1
Burbank L., S.D.	1/6	4

71. Ring-necked Pheasant, Phasianus colchicus, year-round throughout. Introduced.

Egg Date - April 17  
Union Co. - common  
De Soto NWR - abundant  
Sq. C. NWR - common

Bent - nests on ground in open fields and pastures.

Omaha	Xmas	36
Sioux City	Xmas	12
	A 5/4	1
	A.5/5	2
Browns L., Ia.	15/6	2
Sq. C. NWR	24/5	3
Sq. C. NWR	25/5	3

### 4. Meleagrididae

72. Turkey, Meleagris gallapavo, formerly throughout.

Egg Dates - April 3 to June 2

Bent - near oaks, wild pecans, and other nut-bearing trees.

Union Co. 21/5 1

## H. GRUIFORMES

### 1. Gruidae

73. Whooping Crane, Grus americana, formerly Spr., Fall migr. normally to west

Spr. arr. - March 18

Fall dep. - Nov. 12

74. Sandhill Crane, Grus canadensis, Spr., Fall migr.  
 Spr. arr. - March 31 Union Co. - uncommon  
 Fall dep. - Oct. 27 De.Soto NWR - rare  
 Sq. C. NWR - rare

2. Rallidae

75. King Rail, Rallus elegans, sum. res.  
 Spr. arr. - April 10 Union Co. - regular breeder  
 Fall dep. - Sept. 22 Sq. C. NWR - occasional  
 Egg Dates - May 21 to June 30  
 Bent - in or near marshes surrounded by wooded land, nest is  
 built up a foot above water
76. Virginia Rail, Rallus limicola, breeds throughout.  
 Spr. arr. - April 22 Union Co. - tolerably common  
 Fall dep. - Oct. 17 De Soto NWR - rare  
 Egg Dates - May 21 to June 24 Sq. C. NWR - uncommon  
 Bent - in a marsh but drier than habitat preferred by  
 Sora. Nests rests on mud.
77. Sora, Porzana carolina, breeds throughout.  
 Spr. arr. - April 22 Union Co. - common  
 Fall dep. - Oct. 17 De Soto NWR - occasional  
 Egg Dates - May 16 to June 28 Sq. C. NWR - common  
 Bent - Nest in deep water of typha marshes, nest sus-  
 pended from the cattails.  
 A 5/5 1
78. Yellow Rail, Coturnicops noveboracensis, Spr., Fall migr.  
 Spr. arr. - April 22 Sq. C. NWR - rare  
 Fall dep. - Sept. 24
79. Black Rail, Laterallus jamaicensis, sum. res. in S.  
 Spr. arr. - late March to  
 early April  
 Fall dep. - Oct. 11  
 Egg Dates - late May to Mid  
 Aug.  
 Bent - Nests in short grass near edge of marsh (but dry).
80. Common Gallinule, Gallinula chloropus, sum. res.  
 Spr. arr. - April 18 Union Co. - casual migrant, a  
 Fall dep. - Oct. 17 few breed  
 Egg Dates - May 20 to July 4 Sq. C. NWR - rare  
 Bent - In bushes or on sunken logs in ponds.
81. American Coot, Fulica americana, breeds throughout  
 Spr. arr. - March 11 Union Co. - common  
 Fall dep. - Nov. 18 De Soto NWR - common  
 Egg Dates - May 10 to July 6 Sq. C. NWR - abundant

Bent - nests in Scirpus or Typha around borders of sloughs; floating nest.

	G 11/9	2
	M 17/9	4
	F 17/9	17
	W 22/9	1
Yankton, S.D.	27/9	3
	W 25/10	20
	G 26/3	1
	M 18/4	150
Browns L., Ia.	15/6	1
Sq. C. NWR	23/5	20
Sq. C. NWR	25/5	3
Burbank L., S.D.	1/6	6

## I. CHARADRIIFORMES

### 1. Charadriidae

82. Semipalmated Plover, Charadrius semipalmatus, common Spr.,  
Fall migr. throughout.
- |                      |             |                                |
|----------------------|-------------|--------------------------------|
| Spr. arr. - April 22 | Union Co.   | - regular and tolerably common |
| Spr. dep. - May 30   |             |                                |
| Fall arr. - Aug. 5   | De Soto NWR | - occasional                   |
| Fall dep. - Oct. 14  | Sq. C. NWR  | - occasional                   |
| Sq. C. NWR           | 24/5        | 1                              |
83. Piping Plover, Charadrius melodus, breeds in N. portion of area, uncommon, Spr., Fall migr. in S.
- |                              |             |                   |
|------------------------------|-------------|-------------------|
| Spr. arr. - May 8            | Union Co.   | - regular breeder |
| Fall dep. - Sept. 24         | De Soto NWR | - common          |
| Egg Dates - May 26 to July 1 | Sq. C. NWR  | - rare            |
- Bent - nests in the belt of sand bordering a lake (or river) above high water mark where beach grass begins to grow. Makes a small hollow in the sand.
- |             |      |   |
|-------------|------|---|
| De Soto NWR | 26/5 | 3 |
|-------------|------|---|
84. Killdeer, Charadrius vociferus, very common, breeds throughout
- |                               |             |          |
|-------------------------------|-------------|----------|
| Spr. arr. - Feb. 19           | Union Co.   | - common |
| Fall dep. - Nov. 10           | De Soto NWR | - common |
| Egg Dates - April 5 to July 6 | Sq. C. NWR  | - common |
- Bent - nest in the open, in fields within a mile of water.
- |  |        |    |
|--|--------|----|
|  | G 2/9  | 3  |
|  | G 6/9  | 8  |
|  | G 8/9  | 16 |
|  | G 11/9 | 30 |
|  | W 15/9 | 26 |
|  | M 17/9 | 1  |
|  | W 4/10 | 6  |
|  | W 7/10 | 9  |
|  | M 8/10 | 3  |
|  | M 9/10 | 3  |

	W 13/10	11
	M 14/10	3
	M 15/10	3
	G 18/10	23
	W 23/10	1
	G 26/10	6
	G 1/11	5
	G 5/11	7
Omaha	Xmas	1
Yankton, S.D.	21/3	2
Sq. C. NWR	24/5	1
Sq. C. NWR	25/5	1
De Soto NWR	26/5	1

85. American Golden Plover, Pluvialis dominica, Spr., Fall migr. throughout.  
 Spr. arr. - April 8                      Sq. C. NWR - occasional  
 Spr. dep. - May 23  
 Fall arr. - Aug. 3  
 Fall dep. - Nov. 14
86. Black-bellied Plover, Squatarola squatarola, common Spr., Fall migr. throughout.  
 Spr. arr. - May 3                      Union Co. - uncommon  
 Spr. dep. - May 24                      Sq. C. NWR - common  
 Fall arr. - Aug. 7  
 Fall dep. - Nov. 3  
     Sq. C. NWR                      24/5 1  
     Sq. C. NWR                      25/5 1
87. Ruddy Turnstone, Arenaria interpres, Spr., Fall migr. throughout  
 Spr. arr. - May 18                      Union Co. - unusual  
 Spr. dep. - May 30                      De Soto NWR - uncommon  
 Fall arr. - Early August              Sq. C. NWR - uncommon  
 Fall dep. - Early Sept.

## 2. Scolopacidae

88. American woodcock, Philohela minor, breeds throughout.  
 Spr. arr. - March 12                      Union Co. - very rare and  
 Fall dep. - Nov. 3                              casual visitor  
 Egg Dates - March 26 to May 30      De Soto NWR - uncommon  
    Sq. C. NWR - rare  
     Bent - retiring. Nests in older thickets and brushy  
     second growth along streams, where earthworms  
     are available.
89. Common snipe, Capella gallinago, common, breeds to N.;  
 Spr., Fall migr. central, winter resident south.  
 Spr. arr. - March 15                      De Soto NWR - common  
 Fall dep. - Nov. 22                      Sq. C. NWR - common  
 Egg Dates - May 16 to June 10

Bent - nest on wet ground very near marshes.

A 16/10 1  
G 18/10 4  
G 26/10 13  
G 1/11 5  
G 5/11 4  
Xmas 2

Omaha

90. Long-billed curlew, Numenius americanus, occasional migr., formerly common, breeds further west now  
Spr. arr. - April 5 Union Co. - very rare  
Fall dep. - Sept. 1
91. Whimbrel, Numenius phaeopus, uncommon, migr. Spr., Fall  
Spr. migr. - last of April  
Fall migr. - mid Sept.
92. Eskimo Curlew, Numenius borealis, formerly common migr.  
Spr., Fall  
Spr. arr. - April 5  
Spr. dep. - May 1  
Fall dep. - early Aug.  
Bent - nearly extinct. Last seen in study area 1926; elsewhere 1959.
93. Upland Plover, Bartramia longicauda, uncommon, Spr., Fall migr. in south, breeds elsewhere in study area.  
Spr. arr. - April 9 De Soto NWR - occasional  
Fall dep. - Sept. 6 Sq. C. NWR - rare  
Egg Dates - May 4 to July 1  
Bent - formerly nested on the prairie, now in pastures and cultivated fields.  
W 13/10 10  
De Soto NWR 26/5 1
94. Spotted Sandpiper, Actitis macularia, very common, breeds throughout.  
Spr. arr. - April 18 Union Co. - uncommon  
Fall dep. - Nov. 3 De Soto NWR - common  
Egg Dates - May 14 to July 6 Sq. C. NWR - common  
Bent - nesting very adaptable, but always close to water, solitary. In grass, under logs, rarely in a soggy meadow.  
G 2/9 1  
De Soto NWR 26/5 6
95. Solitary Sandpiper, Tringa solitaria, common Spr., Fall migrant throughout.  
Spr. arr. - April 10 Union Co. - uncommon  
Spr. dep. - May 26 De Soto NWR - uncommon  
Fall arr. - July 1 Sq. C. NWR - occasional  
Fall dep. - Oct. 5

96. Willet, Catoptrophorus semipalmatus, common Spr., Fall migr.  
 Spr. arr. - early May Union Co. - casual  
 Fall dep. - early Nov. De Soto NWR - uncommon  
 Sq. C. NWR - occasional  
 Sq. C. NWR 24/5 1  
 Sq. C. NWR 25/5 1
97. Greater Yellowlegs, Totanus melanoleucus, common Spr., Fall migr. throughout.  
 Spr. arr. - March 20 Union Co. - tolerably regular  
 Spr. dep. - May 19 De Soto NWR - common  
 Fall arr. - Aug. 14 Sq. C. NWR - uncommon  
 Fall dep. - Oct. 29  
 G 2/9 2  
 G 18/10 5  
 G 26/10 1
98. Lesser Yellowlegs, Totanus flavipes, fairly common, Spr., Fall migr. throughout.  
 Spr. arr. - March 11 Union Co. - common  
 Spr. dep. - May 28 De Soto NWR - uncommon  
 Fall arr. - July 14 Sq. C. NWR - abundant  
 Fall dep. - Nov. 17  
 G 2/9 2  
 G 6/9 10  
 G 8/9 12  
 G 11/9 30
99. Knot, Calidris canutus, occasional or migr.  
 Spr. arr. - Mid April De Soto NWR - occasional  
 Fall dep. - Mid Sept. Sq. C. NWR - rare
100. Pectoral Sandpiper, Erolia melanotos, Spr., Fall migr. throughout  
 Spr. arr. - March 10 Union Co. - tolerably common  
 Spr. dep. - May 12 Sq. C. NWR - common  
 Fall arr. - Aug. 8  
 Fall dep. - Nov. 24  
 G 2/9 1  
 G 6/9 4  
 G 8/9 6  
 G 11/9 2  
 W 15/9 3  
 M 8/10 14  
 M 15/10 10
101. White-rumped Sandpiper, Erolia fuscicollis, uncommon Spr., Fall migr. throughout  
 Spr. arr. - May 7 Union Co. - regular  
 Spr. dep. - May 30 De Soto NWR - uncommon  
 Fall arr. - Aug. 21 Sq. C. NWR - common  
 Fall dep. - Nov. 7

102. Baird's Sandpiper, Erolia bairdii, uncommon Spr., Fall migr.  
 Spr. arr. - April 9 De Soto NWR - uncommon  
 Spr. dep. - June 11 Sq. C. NWR - occasional  
 Fall arr. - Aug. 9  
 Fall dep. - Nov. 3  
 Sq. C. NWR 24/5 10  
 Sq. C. NWR 25/5 12
103. Least Sandpiper, Erolia minutilla, very common Spr., Fall migr. throughout.  
 Spr. arr. - April 20 Union Co. - common  
 Spr. dep. - May 25 De Soto NWR - uncommon  
 Fall arr. - July 24 Sq. C. NWR - occasional  
 Fall dep. - Oct. 10  
 G 2/9 2  
 G 6/9 1  
 G 8/9 2  
 A 17/5 2
104. Dunlin, Erolia alpina, less common Spr., Fall migr.  
 Spr. arr. - April 29 Union Co. - rare  
 Spr. dep. - June 4 De Soto NWR - uncommon  
 Fall arr. - Sept. 1 Sq. C. NWR - uncommon  
 Fall dep. - Nov. 7
105. Short-billed Dowitcher, Limnodromus griseus, Spr., Fall migr.  
 Spr. migr. - Early May De Soto NWR - uncommon  
 Fall migr. - Late August Sq. C. NWR - rare  
 G 1/11 1
106. Long-billed Dowitcher, Limnodromus scolopaceus, Spr., Fall migr.  
 Spr. arr. - April 28 Union Co. - uncommon spring migrant  
 Fall dep. - Oct. 28 Sq. C. NWR - common
107. Stilt Sandpiper, Micropalama himantopus, uncommon Spr., Fall migr.  
 Spr. arr. - May 9 Union Co. - occasional  
 Fall arr. - July 12 De Soto NWR - occasional  
 Fall dep. - Nov. 11 Sq. C. NWR - rare  
 Sq. C. NWR 24/5 1  
 Sq. C. NWR 25/5 2
108. Semipalmated Sandpiper, Ereunetes pusillus, common Spr., Fall migr.  
 Spr. arr. - May 2 Union Co. - common  
 Spr. dep. - June 8 Sq. C. NWR - rare  
 Fall dep. - Oct. 30  
 G 2/9 1  
 G 8/9 12  
 G 11/9 50  
 A 27/9 6  
 11/10 30  
 G 18/10 1  
 24/5 3  
 25/5 13  
 Elk Is., S.D.  
 Sq. C. NWR  
 Sq. C. NWR



109. Western Sandpiper, Ereunetes mauri, Spr., Fall migr.  
 Spr. dep. - May 24 De Soto NWR - occasional  
 Fall dep. - early Sept. Sq. C. NWR - rare
110. Buff-breasted Sandpiper, Tryngites subruficollis, Spr., Fall migr.  
 Spr. migr. - April Sq. C. NWR - rare  
 Fall arr. - Aug. 12  
 Fall dep. - Sept. 15
111. Marbled Godwit, Limosa fedoa, Spr., Fall migr.  
 Spr. arr. - April 18 Sq. C. NWR - rare  
 Spr. dep. - May 16  
 Fall dep. - Oct. 16  
 Bent- formerly bred in the central plains, south to  
 Sioux City.
112. Hudsonian Godwit, Limosa haemastica, Spr., Fall migr.  
 Spr. arr. - May 8 Union Co. - uncommon spr. migrant  
 Spr. dep. - May 24 Sq. C. NWR - common  
 Fall arr. - Aug. 12  
 Fall dep. - Sept. 15  
 Sq. C. NWR 24/5 1  
 Sq. C. NWR 25/5 1
113. Sanderling, Crocethia alba, Spr., Fall migr.  
 Spr. arr. - April 29 Union Co. - rare  
 Spr. dep. - June 1 De Soto NWR - common  
 Fall arr. - Aug. 22 Sq. C. NWR - rare  
 Fall dep. - Oct. 4

## 3. Recurvirostridae

114. American Avocet, Recurvirostra americana, Spr., Fall migr.  
 Spr. arr. - May 5 Union Co. - rare  
 Fall dep. - Oct. 27 De Soto NWR - rare  
 Sq. C. NWR - occasional

## 4. Phalaropodidae

115. Wilson's Phalarope, Steganopus tricolor, Spr., Fall migr.  
 Spr. arr. - April 29 Union Co. - tolerably common  
 Fall dep. - Sept. 1 spring migrant  
 De Soto NWR - common  
 Sq. C. NWR - common  
 G 2/9 2  
 W 4/10 1
116. Northern Phalarope, Lobipes lobatus, Spr., Fall migr.  
 Spr. arr. - May 10 Union Co. - rare spr. migrant  
 Fall dep. - Oct. 26 De Soto NWR - uncommon  
 Sq. C. NWR - uncommon

## 5. Laridae

117. Herring Gull, Larus argentatus, Spr., Fall migr..Some in winter when water open.  
 Spr. dep. (avg.)- April 15      Union Co. - rare spr. migrant  
 Fall arrival - Oct. 8      De Soto NWR - uncommon  
    Sq. C. NWR - uncommon  
    W 29/11 3  
    21/3 2  
 Yankton, S.D.
118. Ring-billed Gull, Larus delawarensis, Spr., Fall migr..  
 Spr. arr. - March 19      Union Co. - common Spr. migrant  
 Fall dep. - Oct. 17      De Soto NWR - common  
    Sq. C. NWR - common  
    W 15/9 4  
    M 17/9 11  
    W 22/9 2  
 Yankton, S.D.                              27/9 34  
 Elk Is., S.D.                              27/9 7  
    W 27/9 4  
    W 9/10 7  
    W 6/10 8  
    W 7/10 42  
 Yankton, S.D.                              11/10 39  
 Elk Is., S.D.                              11/10 35  
    W 11/10 2  
    W 13/10 11  
    W 16/10 9  
    W 23/10 3  
 Yankton, S.D.                              25/10 129  
    W 25/10 1  
    25/10 5  
 Elk Is., S.D.                              W 29/11 15  
    A 30/11 15  
    W 3/12 11
119. Laughing Gull, Larus atricilla      Union Co. - one specimen found,  
    (1920) very rare  
 Bent - one seen in Iowa, 1894.
120. Franklin's Gull, Larus pipixcan, Spr., Fall migr..  
 Spr. transit - April 6 to      Union Co. - regular and  
    June 27      rather common  
 Fall dep. - Nov. 6      De Soto NWR - occasional  
    Sq. C. NWR - abundant  
 Bent - breed as close as      F 17/9 3  
    Brookings Co. S.D.      W 4/10 65  
    W 6/10 235  
 Yankton, S.D.                              11/10 41  
 Elk Is., S.D.                              11/10 130  
    W 23/10 36  
    G 26/10 5  
    A 3/11 1  
 Yankton, S.D.                              21/3 30

121. Bonaparte's Gull, Larus philadelphia, Spr., Fall migr.  
 Spr. transit - late April      Sq. C. NWR - rare  
 Fall dep. - Nov. 3
122. Forster's Tern, Sterna forsteri, Spr., Fall migr.  
 Spr. arr. - April 7      Union Co. - tolerably common  
 Fall arr. - Oct. 14           spring migrant.  
                                  De Soto NWR - occasional  
                                  Sq. C. NWR - common  
                                  10/5 1  
                                  Burbank L., S.D.
123. Common Tern, Sterna hirundo, Spr., Fall migr.  
 Spr. arr. - April 20      De Soto NWR - uncommon  
 Fall dep. - early Nov.      Sq. Cr. Nwr - occasional
124. Least Tern, Sterna albi frons, breeds along river.  
 Spr. arr. - April 2      Union Co. - regular and per-  
 Fall dep. - Aug. 31           haps common, breeds  
 Egg dates - May 29 to July 4      in late summer on  
                                  Mo. River sandbars  
                                  De Soto NWR - common  
                                  Sq. C. NWR - uncommon  
 Bent - breeding colonies on low sandy islands in the Missouri.  
 Nesting delayed by Spr. high water. Formerly bred  
 as far upriver as Vermillion, S.D.
125. Caspian Tern, Hydroprogne caspia, Spr., Fall migr.  
 Spr. arr. - May 2      Union Co. - rare  
 Fall transit dates - Sept. 9 to De Soto NWR - rare  
                                  Oct. 15      Sq. C. NWR - rare
126. Black Tern, Chlidonias niger, breeds throughout  
 Spr. arr. - March 28      Union Co. - common migrant,  
 Fall transit - Aug. 8 to Oct. 15      may breed  
 Egg dates - May 11 to July 28      De Soto NWR - uncommon  
                                       Sq. C. NWR - common  
 Bent - sloughs, marshes and wet meadows  
                                  Burbank L., S.D.      10/16 10  
                                  Browns L., Ia.      15/5 3  
                                  Sq. C. NWR      24/5 3  
                                  Sq. C. NWR      25/5 3

## J. COLOMBIFORMES

### 1. Columbidae

127. Rock Dove, Columba livia, year-around throughout  
 Sq. C. NWR - occasional
128. Mourning Dove, Zenaidura macroura, year-around resident throughout  
 Union Co. - abundant summer,  
                                  occasional winter  
 De Soto NWR - abundant  
 Sq. C. NWR - abundant  
 Bent - Human satellite; nests near trunk on branch of  
 evergreen,

	G 6/9	20
	G 11/9	50
Omaha	Xmas	61
St. Joseph	Xmas	12
Yankton, S.D.	Xmas	3
	A 5/5	1
Browns L., Ia.	15/50	16
	A 17/5	10
	A 18/5	10
Sq. C. NWR	23/5	30
Burbank L., S.D.	1/6	6

129. Passenger Pigeon, Ectopistes migratorius, Extinct, formerly bred.

#### K. PSITTACIFORMES

##### 1. Psittacidae

130. Carolina Parakeet, Conaropsis carolinensis, Extinct, formerly bred

131. Monk Parakeet, Myiopsitta monachus, first seen in this area at Omaha - Oct. 27, 1972 nesting. (nest in fall in this hemisphere).

From Argentina; gregarious when not breeding  
heavy bill, yellowish abdomen, green back. large (2 M.  
diameter) stick nests high in trees (14 to 18 M.)

Omaha Xmas 2

#### L. CUCULIFORMES

##### 1. Cuculidae

132. Yellow-billed Cuckoo, Coccyzus americanus, breeds throughout  
Spr. arr. - May 17 Union Co. - tolerably common  
Fall dep. - Sept. 24 De Soto NWR - common  
Egg dates - May 20 to July 19 Sq. C. NWR - common  
Bent - prefer not very dense woods, orchards, roadsides  
(accustomed to humanity), low tree limbs or bushes.

Sq. C. NWR 23/5 1  
Sq. C. NWR 25/5 1  
Waubaunsie S.P.K., Ia. 26/5 1

133. Black-billed Cuckoo, Coccyzus erythrophthalmus, breeds throughout  
Spr. arr. - May 13 Union Co. - somewhat less  
Fall dep. - Sept. 25 abundant than  
Egg dates - May 7 to July 20 Yellow-billed cuckoo

De Soto NWR - common  
Sq. C. NWR - uncommon

Bent - nest in low elevations; near ground in small trees,  
bushes, thickets.

Waubaunsie S.P.K., Ia. A 18/5 1  
26/5 1

## M. STRIGIFORMES

## 1. Tytonidae

134. Barn Owl, Tyto alba, year-around resident throughout.  
 Union Co. - not likely to be numerous  
 Sq. C. NWR - rare

## 2. Strigidae

135. Screech Owl, Otus asio, year-round resident throughout.  
 Union Co. - tolerably common  
 De Soto NWR - uncommon  
 Sq. C. NWR - occasional  
 Omaha Xmas 5  
 St. Joseph Xmas 2  
 Yankton, S.D. Xmas 1
136. Great Horned Owl, Bubo virginianus, year-round resident throughout.  
 Union Co. - regular  
 De Soto NWR - common  
 Sq. C. NWR - common  
 Omaha Xmas 10  
 St. Joseph Xmas 2  
 Yankton, S.D. Xmas 3  
 Sioux City Xmas 1
137. Snowy Owl, Nyctea scandiaca, rarely winters irregularly in N. end of study area, less commonly to S.  
 Union Co. - casual  
 De Soto NWR - rare
138. Burrowing Owl, Speotyto cunicularia, Spr., Fall migrant breeds just N and W of area.
139. Barred Owl, Strix varia, year-round resident throughout.  
 Union Co. - regular  
 De Soto NWR - common  
 Sq. C. NWR - common  
 Omaha Xmas 4
140. Long-eared Owl, Asio otus, year-round resident.  
 Sq. C. NWR - rare
141. Short-eared Owl, Asio flammeus, year-round resident.  
 Union Co. - not uncommon migrant, a few breed  
 De Soto NWR - occasional  
 Sq. C. NWR - common
142. Western Burrowing Owl, Speotyto cunicularia hypugaea  
 Union Co. - uncommon migrant

143. Saw-whet Owl, Aegolius acadicus, year-round resident  
De Soto NWR - common  
Sq. C. Nwr - rare

N. CAPRIMULGIFORMES

1. Caprimulgidae

144. Chuck-will's-widow, Caprimulgus carolinensis breeds in S. 2/3 of study area.  
Spr. arr. - April 26 Sq. C. NWR - rare  
Fall dep. - Sept. 5  
Egg dates - April 14 to June 16  
Bent - mixed oak & pine woods with no undergrowth-builds no nest.
145. Whip-poor-will, Caprimulgus vociferous, breeds throughout.  
Spr. arr. - April 11 De Soto NWR - occasional  
Fall dep. - Oct. 2 Sq. C. NWR - occasional  
Egg dates - May 9 to July 26  
Bent - lay eggs on dry, well-drained ground in small mixed woods with no undergrowth.
146. Common Nighthawk, Chordeiles minor, breeds throughout.  
Spr. arr. - May 10 Union Co. - tolerably common  
Fall dep. - Oct. 1 De Soto NWR - uncommon  
Egg dates - June 10 to July 1 Sq. C. NWR - occasional  
Bent - open, barren, gravelly areas; or flat roof-tops and vineyards.

O. APODIFORMES

1. Apodidae

147. Chimney Swift, Chaetura pelagica, breeds throughout area.  
Spr. arr. - April 7 Union Co. - tolerably common  
Fall dep. - Sept. 26 De Soto NWR - occasional  
Egg dates - May 15 to July 3 Sq. C. NWR - occasional  
Bent - normally in first 20 feet (from top) of chimney.  
Vermillion 5/5 10  
Sq. C. NWR 25/5 2
148. Ruby-throated Hummingbird, Archilochus colubris, breeds throughout area.  
Spr. arr. - May 17 De Soto NWR - rare  
Fall dep. - Oct. 23 Sq. C. NWR - occasional  
Egg dates - June 1 to July 17  
Bent - usually near or over water, 10-12 ft. above ground.

P. CORACIIFORMES

1. Alcedinidae

149. Belted Kingfisher, Megaceryle alcyon, year-around resident throughout area.  
 Spr. arr. - March 18 Union Co. - tolerably common  
 Fall dep. - Nov. 11 summer resident,  
 Egg dates - May 10 to June 8 occasionally remains  
 thruout the winter  
 along the Big Sioux  
 River.  
 De Soto NWR - occasional  
 Sq. C. NWR - occasional  
 Bent - nests in burrow in sandy bank as close as possible to  
 fishing grounds.  
 Omaha Xmas 2  
 W 22/9 1  
 Yankton, S.D. 27/9 1  
 Elk Is., S.D. 27/9 1  
 Elk Pt., S.D. 27/9 1  
 Sq. C. NWR 25/5 1  
 Burbank L., S.D. 1/6 1

Q. PICIFORMES

1. Picidae

150. Yellow-shafted flicker, Colaptes auratus, year-round resident throughout.  
 Egg dates - April 30 to May 30 Union Co. - very common  
 De Soto NWR - common  
 Sq. C. NWR - common  
 Bent - found in areas with many dead trees (cut over).  
 Nest in holes (3-100 ft. high). Some birds  
 wintering to S. join residents there  
 Omaha Xmas 120  
 St. Joseph Xmas 41  
 Yankton, S.D. Xmas 3  
 Sioux City, Xmas 6  
 Browns L., Ia. A 5/5 1  
 15/5 1  
 A 17/5 1  
 A 18/5 2  
 Sq. C. NWR 25/5 1  
 Waubaunsie S. PK., Ia. 26/5 1  
 Burbank L., S.D. 1/6 1

151. Red-shafted Flicker, Colaptes cafer collaris, Breeds in N. of area, year-round elsewhere.  
 Spr. arr. - April 1 Union Co. - casual winter or  
 Fall dep. - Oct. 15 summer visitor  
 Drifts into area from the  
 Rockies in Fall and winter  
 Egg dates - May 5 to July 1  
 Bent - found breeding in Yankton, (Northern limit of  
 wintering) nest in holes near farms or cut-over  
 woods.  
 Omaha Xmas 2





Bent - nests in upland deciduous forests from 5 to 30 ft. high; shy, generally non-migratory.

Omaha	Xmas	26
St. Joseph	Xmas	7
Sioux City	Xmas	11
	A	18/5 1
Waubaunsie S. PK., Ia.	26/5	1

158. Downy Woodpecker, Dendrocopos pubescens, year-round resident throughout.

Egg dates - April 3 to June 3	Union Co.	- common
	De Soto NWR	- common
	Sq. C. NWR	- common

Bent - tame, prefers open woods, makes own nest-hole.

-not migratory, but moves locally away from family and excavates a solitary roost hole in fall.

Omaha	Xmas	166
St. Joseph	Xmas	26
Yankton, S.D.	Xmas	3
Sioux City	Xmas	28
Sq. C. NWR	24/5	1

## R. PASSERIFORMES

### 1. Tyrannidae

159. Eastern Kingbird, Tyrannus tyrannus, breeds throughout

Spr. arr. - April 23	Union Co.	- common
Fall dep. - Sept. 22	De Soto NWR	- abundant
Egg dates - May 2 to July 27	Sq. C. NWR	- common

Bent - nests in trees or stumps near water or half-submerged.

	A	5/5 2
	A	17/5 2
	A	18/5 2
Sq. C. NWR	23/5	1
Waubaunsie S. PK., Ia.	26/5	1

160. Western Kingbird, Tyrannus verticalis, breeds throughout.

Spr. arr. - April 26	Union Co.	- tolerably common
Fall dep. - Sept. 23	De Soto NWR	- occasional
Egg dates - June 4 to 25	Sq. C. NWR	- rare

Bent - nests anywhere except on the ground.

161. Great Crested Flycatcher, Myiarchus crinitus, breeds throughout.

Egg dates - May 25 to July 10	Union Co.	- tolerably common
Spr. arr. - May 2	De Soto NWR	- uncommon
Fall dep. - Sept. 17	Sq. C. NWR	- common

Bent - hole-nesting

Sq. C. NWR	24/5	1
Waubaunsie, S. PK., Ia.	26/5	1

162. Eastern Phoebe, Sayornis phoebe, breeds throughout area.  
 Spr. arr. - March 12 Union Co. - tolerably common  
 Fall dep. - Oct. 30 De Soto NWR - occasional  
 Egg dates - April 1 to June 16 Sq. C. NWR - common  
 Bent - nest in man-made structures (bridges, barns)  
 using moss and mud.
163. Acadian Flycatcher, Empidonax virescens, breeds N. to Sioux  
 City.  
 Spr. arr. - May 5 Union Co. - uncommon migrant  
 and probable nester  
 Fall dep. - Oct. 14 De Soto NWR - uncommon  
 Egg dates - May 30 to June 25 Sq. C. NWR - uncommon  
 Bent - nests in low trees near streams (late May).  
 Waubaunsie S. PK., Ia. 26/5 1
164. Traill's Flycatcher, Empidonax traillii, breeds throughout  
 Spr. arr. - May 5 De Soto NWR - common  
 Fall dep. - Oct. 14  
 Egg dates - May 30 to June 25  
 Bent - Low in small bushes (Mid-June).  
 Sq. C. NWR 24/5 2  
 Sq. C. NWR 25/5 1
165. Least Flycatcher, Empidonax minimus, breeds throughout  
 Spr. arr. - April 24 Union Co. - fairly common Spr.,  
 Fall migr. not known  
 Fall dep. - Oct. 28 to nest.  
 Egg dates - June 4 to 20  
 De Soto NWR - common  
 Sq. C. NWR - uncommon  
 Bent - nests in deciduous open woodlands or apple trees.  
 Burbank L., S.D. 10/5 1  
 A 17/5 1  
 A 18/5 1  
 Waubaunsie S.PK., Ia. 26/5 1
166. Eastern Wood Peewee, Contopus virens, breeds throughout.  
 Spr. arr. - May 4 Union Co. - tolerably common  
 Fall dep. - Oct. 1 De Soto NWR - common  
 Egg dates - May 20 to July 22 Sq. C. NWR - common  
 Bent - nests 20 ft. high in open, mixed woods or old  
 orchids near field borders.  
 Sq. C. NWR 23/5 1  
 Waubaunsie S. PK., Ia. 26/5 1
167. Olive-sided Flycatcher, Nuttallornis borealis, Spr., Fall migr.  
 Spr. arr. - May 15 Union Co. - regular but common  
 Fall dep. - Mid. Sept. Sq. C. Nwr - uncommon

## 2. Alaudidae

168. Horned Lark,
- Eremophila alpestris
- , year-round resident throughout.

No migr. in study area	Union Co.	- fairly common
Egg dates - March 27 to July 16	De Soto Nwr	- common
	Sq. C. NWR	- common

Bent - nest on bare ground

Omaha	Xmas	262
St. Joseph	Xmas	81
Yankton	Xmas	9
Sioux City	Xmas	20

## 3. Hirundinidae

169. Tree Swallow,
- Iridoprocne bicolor
- , breeds in N., Spr., Fall migr. elsewhere.

Spr. arr. - March 18	Union Co.	- tolerably common
Fall dep. - Oct. 31		migrant and occa- sional nester
Egg dates - May 10 to June 9	De Soto NWR	- uncommon
	Sq. C. NWR	- common

Bent - holes in trees, especially near water.

Browns L., Ia.	15/5	1
De Sota NWR	26/5	1

170. Bank Swallow,
- Riparia riparia
- , breeds throughout.

Spr. arr. - April 21	Union Co.	- common
Fall dep. - Sept. 26	De Soto NWR	- abundant
Egg dates - May 18 to June 22	Sq. C. NWR	- abundant
Bent - burrow into vertical stream banks, nest in colonies (late May)		

G 8/9 20

W 4/10 35

Burbank L., S.D.	10/5	11
Sq. C. NWR	23/5	1
Sq. C. NWR	24/5	3
De Sota NWR	26/5	4

171. Rough-winged Swallow,
- Stelgidopteryx ruficollis
- , breeds throughout.

Spr. arr. - March 27	Union Co.	- tolerably common
Fall dep. - Sept. 11	De Soto NWR	- uncommon
Egg dates - May 17 to June 6	Sq. C. NWR	- occasional
Bent - burrows in steep banks (solitary) or around buildings.		

172. Barn Swallow,
- Hirundo rustica
- , breeds throughout.

Spr. arr. - April 15	Union Co.	- common
Fall dep. - Oct. 3	De Soto NWR	- common
Egg dates - May 12 to July 17	Sq. C. NWR	- abundant
Bent - Makes mud nest in barns or along rocky cliffs.		

Burbank L., S.D.	10/5 5
	A 18/5 2
Sq. C. NWR	23/5 1
Sq. C. NWR	24/5 1

173. Cliff Swallow, Petrochelidon pyrrhonota, breeds throughout.  
 Spr. arr. - April 21 Union Co. - regular  
 Fall dep. - Sept. 10 De Soto NWR - common  
 Egg dates - May 20 to July 5 Sq. Cr. NWR - abundant  
 Bent - nests on cliffs or eaves of buildings.
174. Purple Martin, Progne subis, breeds throughout.  
 Spr. arr. - April 2 Union Co. - tolerably common  
 Fall dep. - Sept. 24 De Soto NWR - uncommon  
 Egg dates - late May Sq. C. NWR - occasional  
 Bent - normally only nest in man-made nesting boxes.  
 (late April).

#### 4. Corvidae

175. Blue Jay, Cyanocitta cristata, year-round resident throughout.  
 Some migratory movement within Union Co. - common  
 permanent summer and winter range in Spr. and Fall. De Soto NWR - abundant  
 Sq. C. NWR - common  
 Egg dates - April 27 to June 11  
 Bent - Dense coniferous thickets below 60 ft.
- |                    |          |
|--------------------|----------|
|                    | W 22/9 1 |
| Omaha              | Xmas 72  |
| St. Joseph         | Xmas 65  |
| Yankton            | Xmas 1   |
| Sioux City         | Xmas 20  |
|                    | A 5/5 3  |
| Browns L., Ia.     | 15/5 4   |
|                    | A 18/5 3 |
| Waubaunsie SP. Ia. | 26/5 1   |
176. Black-billed Magpie, Pica pica, occasional winter visitor in N.  
 Union Co. - irregular winter  
 visitor in small  
 numbers.  
 De Soto NWR - rare  
 Bent - nonmigratory but given to erratic wandering.  
 Found in central Nebraska.
177. Common Crow, Corvus brachyrhynchos, year-round resident.  
 Migrate through study area in Union Co. - abundant  
 large numbers in Spr. and Fall De Soto NWR - uncommon  
 Egg dates - March 27 to May 22 Sq. C. NWR - common  
 Bent - nests in trees when possible but otherwise anywhere.  
 Breed isolated in pairs although they gather into  
 roosts in the fall.

	W 15/9	10
	W 27/4	57
	W 4/10	6
	W 6/10	2
	W 7/10	1
	W 16/10	15
	A 30/11	7
Omaha	Xmas	115
St. Joseph	Xmas	2290
Yankton, S.D.	Xmas	3
Sioux City	Xmas	22
Yankton, S.D.	21/3	2
Sq. C. NWR	23/5	2

## 5. Paridae

178. Black-capped Chickadee, Parus atricapillus, year-round resident.  
Slight southern movement Union Co. - summer-tolerably  
in Fall. common, winter-  
abundant  
Egg dates - April 20 to June 11

De Soto NWR - common  
Sq. C. NWR - common

Bent - nests in self-made holes a few feet from ground

	W 22/9	1
Omaha	Xmas	438
St. Joseph	Xmas	112
Yankton, S.D.	Xmas	7
Sioux City	Xmas	47
	A 5/4	7
	A 5/5	1
Browns L., Ia.	15/5	1
Sq. C. NWR	24/5	2

179. Tufted Titmouse, Parus bicolor, year-round resident, southern  
2/3rds of area; occasional in N. Union Co. - casual summer  
Not migratory resident  
Egg dates - April 16 to May 27 De Soto NWR - rare  
Sq. C. NWR - common

Bent - tree cavities in river-bottom forests (late April)

Omaha	Xmas	113
St. Joseph	Xmas	25

## 6. Sittidae

180. White-breasted Nuthatch, Sitta carolinensis, year-round throughout.  
Not migratory Union Co. - winter-common;  
Egg dates - April 29 to May 11 summer-regular

Sq. C. NWR - occasional

Bent - use mature oak or maple forests with decayed trees,  
occupy existent cavity.

Omaha	Xmas	150
St. Joseph	Xmas	14
Yankton	Xmas	1
Sioux City	Xmas	14
Waubausie S.PK., Ia.	26/5	1

181. Red-breasted Nuthatch, Sitta canadensis winter resident throughout.

Spr. arr. - April 14	Union Co. - uncommon
Spr. dep. - May 13	Sq. C. NWR - occasional
Fall arr. - Sept. 9	
Fall dep. - Oct. 29	
Bent - doesn't breed here	
Omaha	Xmas 3
St. Joseph	Xmas 6

7. Certhiidae

182. Brown Creeper, Certhia familiaris, winter resident.

Spr. arr. - March 18	Union Co. - tolerably common
Spr. dep. - May 9	De Soto NWR - uncommon
Fall arr. - Sept. 18	Sq. C. NWR - uncommon
Fall dep. - Nov. 15	
Bent - Omaha, Neb. S. edge of breeding area. Nests behind loosened bark of dead trees (us. Fir) or in Knotholes (in Nebraska only).	
Omaha	Xmas 13
St. Joseph	Xmas 13
Sioux City	Xmas 4
N. of Vermillion	8/4 1

8. Troglodytidae

183. House Wren, Troglodytes aedon, breeds throughout.

Spr. arr. - April 17	Union Co. - abundant
Fall dep. - Oct. 2	De Soto NWR - abundant
Egg dates - May 10 to July 27	Sq. C. NWR - common
Bent - eccentric in choice of site; naturally a hollow stump-now semidomesticated, inhabit any hollow outdoor human artifact.	
	A 17/5 1
	A 18/5 5
Sq. Cr. NWR	24/5 2
Waubausie, S.PK., Ia.	26/5 2

184. Winter Wren, Troglodytes troglodytes, uncommon winter resident S. to Omaha.

Spr. arr. - April 10	
Fall dep. - Oct. 5	
Omaha	Xmas 5
St. Joseph	Xmas 1

185. Be Wren, Thryomanes bewickii, year-round resident.

Spr. arr. - March 19	Sq. C. NWR - uncommon
Fall dep. - Oct. 1	
Egg dates - March 28 to June 17	
Bent - Knotholes or old woodpecker holes in the wild; also semi-domesticated - uses any available opening.	

186. Carolina Wren, Thryothorus ludovicianus, year-round in S., occasional in No.  
 Non-migratory Sq. C. NWR - occasional  
 Egg dates - March to July 9  
 Bent - In the wild in holes or under roots or in a hole in a bank. Also semi-domesticated.  
 Omaha Xmas 2
187. Long-billed Marsh Wren, Telmatodytes polustris, breeds throughout  
 Spr. arr. - April 17 Union Co. - common summer  
 Fall dep. - Nov. 12 resident  
 Egg dates - May 26 to July 27 De Soto NWR - occasional  
 Sq. C. NWR - uncommon  
 Bent - Nest in wet marshes, prefer narrowleaf cattail (Typha angustifolia) or less often bullrush or sedges. Nest is oval and high in the air.  
 A 5/11 1  
 Burbank L., S.D. 10/5 1  
 Browns L., Ia. 15/5 1  
 A 17/5 1  
 Burbank L., S.D. 1/6 6
188. Short-billed Marsh Wren, Cistothorus platensis, breeds throughout  
 Spr. arr. - April 28 Union Co. - regular  
 Fall dep. - Oct. 13 De Soto NWR - occasional  
 Egg dates - June 9 to June 19 Sq. C. NWR - uncommon  
 Bent - drier marshes, wet meadows or sedge meadows (Carex) nest is low-to-ground and globular.

## 9. Mimidae

189. Mockingbird, Mimus polyglottos, year-round resident Southern 2/3rds, occasional to N.  
 Egg dates - May 2 to June 23 Union Co. - casual resident  
 Non-migratory occasional winter  
 De Soto NWR - rare  
 Sq. C. NWR - occasional  
 Bent-Nests low (3-10 ft.) preferably near human habitation, in vines or ivy near a house.  
 St. Joseph Xmas 7
190. Catbird, Dumetella carolinensis, breeds throughout.  
 Spr. arr. - April 29 Union Co. - common  
 Fall dep. - Oct. 1 De Soto NWR - common  
 Egg dates - May 12 to June 28 Sq. C. NWR - common  
 Bent - low nests (2-6 ft.) in thickets and vines, often close to marshes or streams.  
 Browns L., Ia. 15/5 2  
 A 17/5 2  
 A 18/5 2  
 Sq. C. NWR 23/5 1  
 Sq. C. NWR 25/5 2  
 Burbank L., S.D. 1/6 1

191. Brown Thrasher, *Toxostoma rufum*, breeds throughout  
 Spr. arr. - April 27 Union Co. - common  
 Fall dep. - Oct. 3 De Soto NWR - common  
 Egg dates - April 29 to June 19 Sq. C. NWR - common  
 Bent - in tangles and shrubbery low to ground (1-2 ft.)  
 often near human habitation.
- |                  |        |   |
|------------------|--------|---|
| Omaha            | Xmas   | 1 |
|                  | A 5/5  | 2 |
| Burbank L., S.D. | 10/5   | 4 |
| Browns L., Ia.   | 15/5   | 1 |
|                  | A 17/5 | 2 |
|                  | A 18/5 | 5 |
| Sq. C. NWR       | 23/5   | 1 |
| Sq. C. NWR       | 24/1   | 1 |
| Sq. C. NWR       | 25/5   | 1 |
10. Turdidae
192. Robin, *Turdus migratorius*, year-round resident throughout.  
 Spr. arr. - Feb. 28 Union Co. - very common  
 Fall dep. - Nov. 26 summer resident  
 Egg dates - April 18 to July 20 De Soto NWR - common  
 Sq. C. NWR - common
- Bent - nests everywhere but in bird houses.
- |                   |        |    |
|-------------------|--------|----|
| Omaha             | Xmas   | 2  |
| St. Joseph        | Xmas   | 1  |
|                   | A 5/4  | 10 |
| Burbank, L., S.D. | 10/5   | 4  |
|                   | A 17/5 | 3  |
| Sq. C. NWR        | 23/5   | 2  |
| Sq. C. NWR        | 25/5   | 1  |
193. Wood Thrush, *Hylocichla mustelina*, breeds throughout.  
 Spr. arr. - April 25 Union Co. - tolerably common  
 Fall dep. - Sept. 30 De Soto NWR - common  
 Egg dates - May 3 to July 10 Sq. C. NWR - occasional  
 Bent - nest 10 ft. up in saplings or undergrowth in low,  
 cool, damp forests near streams.
- |                      |      |   |
|----------------------|------|---|
| Sq. C. NWR           | 24/5 | 1 |
| Waubausie S.PK., Ia. | 26/5 | 1 |
194. Swainson's Thrush, *Hylocichla ustulata*, Spr., Fall migr.  
 Spr. arr. - April 28 Union Co. - common Spr.,  
 Spr. dep. - June 3 Fall migr.  
 Fall arr. - Early August De Soto NWR - uncommon  
 Fall dep. - Oct. 16 Sq. C. NWR - occasional
195. Eastern Hermit Thrush, *Hylocichla guttata faxoni*  
 Spr. arr. - March 30 Union Co. - uncommon migrant  
 Spr. dep. - mid May  
 Fall dep. - Oct. 24



196. Gray-cheeked Thrush, Hylocichla minima, Spr., Fall migr.  
 Spr. arr. - April 29 Union Co. - tolerably common  
 Spr. dep. - June 4  
 Fall arr. - early Sept.  
 Fall dep. - Oct. 16  
 A 17/5 1
197. Veery, Hylocichla fuscescens, Spr., Fall migr.  
 Spr. arr. - May 2 Union Co. - rare Spr.,  
 Fall dep. - Sept. 23 Fall migr.
198. Eastern Bluebird, Sialia sialis, year-round S. part; breeds in N.  
 Spr. arr. - March 21 Union Co. - regular Spr., Fall  
 Fall dep. - Nov. 27 migrant; occasional  
 Egg dates - March 26 to June 20 summer resident  
 De Soto NWR - uncommon  
 Sq. C. NWR - uncommon  
 Bent - in settled areas most nest in bird-boxes, otherwise  
 in old orchards in cavities of trees  
 Omaha Xmas 10  
 A 5/5 3  
 A 17/5 1

## 11. Sylviidae

199. Blue-grey Gnatcatcher, Polioptila caerulea, breeds throughout.  
 Spr. arr. - April 12 Sq. C. NWR - common  
 Fall dep. - Sept. 15  
 Egg dates - April 15 to May 25  
 Bent - In very wide range of habitats, nests in any kind of  
 tree; often scrub oak or pine.
200. Golden-crowned Kinglet, Regulus satrapa, winter resident  
 throughout.  
 Spr. arr. - March 20 Union Co. - regular Spr.,  
 Spr. dep. - May 6 Fall migrant a  
 Fall arr. - Oct. 7 few in winter  
 Fall dep. - Nov. 27 Sq. C. NWR - uncommon  
 Omaha Xmas 17  
 St. Joseph Xmas 4
201. Ruby-crowned Kinglet, Regulus calendula, Spr., Fall migrant  
 in N., winter resident in S.  
 Spr. arr. - March 24 Union Co. - tolerably common  
 Spr. dep. - May 21 De Soto NWR - common  
 Fall dep. - Nov. 1  
 Omaha Xmas 1

## 12. Motacillidae

202. Water Pipit, Anthus spinoletta, Spr., Fall migr.  
 Spr. arr. - March 27 Union Co. - regular  
 Spr. dep. - May 27  
 Fall arr. - Sept. 4  
 Fall dep. - Nov. 1  
 G 18/10 3
203. Sprague's Pipit, Anthus spragueii, Spr., Fall migra.  
 Spr. arr. - April 14  
 Spr. dep. - April 26  
 Fall arr. - Oct. 1  
 Fall dep. - Oct. 30
13. Bombycillidae
204. Bohemian Waxwing, Bombycilla garrulus occasional winter resident throughout.  
 Fall arr. - Nov. 29 Union Co. - very regular  
 Spr. dep. - April 25  
 Bent - does not breed here - irregular winter or early spr. migrations, erratic timing.
205. Cedar Waxwing, Bombycilla cedrorum, year-round throughout,  
 Spr. arr. - Feb. 21 Union Co. - regular winter  
 Fall dep. - Nov. 15 De Soto NWR - uncommon  
 Egg dates - June 7 to Aug. 19 Sq. C. NWR - common  
 Bent - nests high in evergreens, late in the season  
 Omaha Xmas 7  
 St. Joseph Xmas 9
14. Laniidae
206. Northern Shrike, Lanius excubitor, winter resident throughout.  
 Spr. dep. - March 28 Union Co. - rare  
 Fall arr. - Oct. 27  
 Omaha Xmas 1
207. Loggerhead Shrike, Lanius ludovicianus, breeds (summer resident)  
 Spr. arr. - March 24 Union Co. - tolerably common  
 Fall dep. - Nov. 19 De Soto NWR - uncommon  
 Egg dates - April 4 to July 5 Sq. C. NWR - occasional  
 Bent - nests in young oaks at medium elevation; tame.  
 Omaha Xmas 1  
 St. Joseph Xmas 1
15. Sturnidae
208. Starling, Sturnus vulgaris, Introduced, year-round resident  
 Union Co. - common  
 De Soto NWR - common  
 Sq. C. NWR - abundant  
 G 11/9 70  
 G 18/10 107  
 Omaha Xmas 1407  
 St. Joseph Xmas 857  
 Yankton Xmas 44

Sioux City	Xmas 5000
	A 5/4 4
Brown's L., Ia.	15/5 10

## 16. Vireonidae

209. Bell's Vireo, Vireo bellii, breeds throughout.  
 Spr. arr. - April 30 Union Co. - common  
 Fall dep. - Sept. 5 De Soto NWR - common  
 Egg dates - May 25 to July 6 Sq. C. NWR - common  
 Bent - Along bottom lands of the upper Missouri river, in low, dense thickets nest low to the ground.  
 A 5/5 1  
 A 17/5 1  
 A 18/5 1  
 Sq. C. NWR 23/5 2  
 Sq. C. NWR 25/5 1
210. Yellow-Throated Vireo, Vireo flavifrons, breeds throughout.  
 Spr. arr. - April 26 Union Co. - Spr., Fall  
 Fall dep. - Oct. 3 migrant  
 Egg dates - April 24 to July 4  
 Bent - nests in decid. trees low to ground. Tame.
211. Solitary Vireo, Vireo solitarius, Spr., Fall migr.  
 Spr. arr. - April 29 Union Co. - regular  
 Fall dep. - Oct. 15
212. Red-eyed Vireo, Vireo olivaceus, breeds throughout.  
 Spr. arr. - April 20 Union Co. - tolerably common  
 Fall dep. - Oct. 1 De Soto NWR - occasional  
 Egg dates - June 3 to July 2 Sq. C. NWR - common  
 Bent - live in tops of decid. trees, build pensile nests  
 Sq. C. NWR 24/5 1
213. Philadelphia Vireo, Vireo philadelphicus, Spr., Fall migr. throughout.  
 Spr. arr. - May 16  
 Spr. dep. - May 31  
 Fall arr. - Aug. 31  
 Fall dep. - Oct. 1
214. Warbling Vireo, Vireo gilvus, breeds throughout.  
 Spr. arr. - April 25 Union Co. - tolerably common  
 Fall dep. - Sept. 30 De Soto NWR - abundant  
 Egg dates - mid May thru June Sq. C. NWR - uncommon  
 Bent - a semi-pensile nest very high in Poplars, Elms, or Maples.  
 Sq. C. NWR 25/5 1

## 17. Parulidae

215. Black-and-white Warbler, Mniotilta varia, breeds throughout, more common as migrant.  
 Spr. arr. - April 21 Union Co. - may nest, tolerably common migrant.  
 Fall dep. - Oct. 1  
 Egg dates - mid May to Early June  
 (nests) De Soto NWR - uncommon  
 Sq. C. NWR - uncommon  
 Bent - (early) feeds on oak trunks but nests on ground against a tree.  
 A 17/5 1
216. Orange- roned Warbler, Vermivora celata, Spr., Fall migr:  
 Spr. arr. - April 24 Union Co. - regular and tolerably common  
 Spr. dep. - June 6  
 Fall arr. - Aug. 28  
 Fall dep. - Oct. 14
217. Nashville Warbler, Vermivora ruficapilla, Spr., Fall migr.  
 Spr. arr. - April 26 Union Co. - rather uncommon  
 Spr. dep. - June 2 De Soto NWR - occasional  
 Fall arr. - Aug. 2 Sq. C. NWR - uncommon  
 Fall dep. - Oct. 14
218. Parula Warbler, Parula americana, Spr., Fall migr.  
 Spr. arr. - April 28 Union Co. - rare  
 Fall dep. - Oct. 5
219. Yellow Warbler, Dendroica petechia, breeds throughout.  
 Spr. arr. - April 20 Union Co. - abundant  
 Fall dep. - Sept. 26 De Soto NWR - abundant  
 Egg dates - May 29 to June 23 Sq. C. NWR - common  
 Bent - Nests along streams on the borders of swamps, among willows and blueberry; or along hedgerows and grown-up fences; 3 to 6 feet up.  
 Burbank L., S.D. 10/5 2  
 Browns L., Ia. 15/5 1  
 A 17/5 2  
 A 18/5 3  
 Sq. C. NWR 23/5 3  
 Sq. C. NWR 24/5 5  
 Sq. C. NWR 25/5 3  
 Burbank L., S.D. 1/6 3
220. Magnolia Warbler, Dendroica magnolia, Spr., Fall migr.  
 Spr. arr. - April 29 Union Co. - regular  
 Spr. dep. - June 2  
 Fall arr. - Aug. 20  
 Fall dep. - Oct. 5

221. Cape May Warbler, Dendroica tigrina, migr.  
 Spr. arr. - May 2  
 Spr. dep. - June 3  
 Fall arr. - Aug. 25  
 Fall dep. - Nov. 27
222. Prothonotary Warbler, Protonotaria citrea, breeds in S. half.  
 Spr. arr. - Aug. 26 Union Co. - a summer resident  
 Fall dep. - Aug. 31  
 Egg dates - May 6 to June 21  
 Bent - In damp and swampy river bottoms, and low-lying, occasionally flooded woods among Salix niger and Cephalanthus occidentalis; nests in cavities 5-10 ft. high, usually above water.
223. Golden-winged Warbler, Vermivora chrysoptera, Spr., Fall migr.  
 Spr. arr. - April 27  
 Spr. dep. - May 25  
 Fall dep. - Sept. 30
224. Blue-winged Warbler, Vermivora pinus, Breeds in S. half.  
 Spr. arr. - April 28  
 Fall dep. - Sept. 20  
 Egg dates - Mid May through June  
 Bent - In deep, swampy woods nests in clumps of vines, N. Missouri state part of "center of abundance" for this bird.
- |                        |          |
|------------------------|----------|
|                        | A 18/5 1 |
| Sq. C. NWR             | 24/5 1   |
| Sq. C. NWR             | 25/5 1   |
| Waubausie, S. PK., Ia. | 26/5 1   |
225. Tennessee Warbler, Vermivora peregrina, Spr., Fall migr.  
 Spr. arr. - April 25 Union Co. - very common Spr.,  
 Spr. dep. - June 6 Fall migr.  
 Fall arr. - Aug. 20  
 Fall dep. - Oct. 14  
 Vermillion
- |  |            |
|--|------------|
|  | 5/5 dozens |
|  | A 18/5 2   |
226. Myrtle Warbler, Dendroica coronata, Spr., Fall Migr.  
 Spr. arr. - April 3 Union Co. - abundant migrant  
 Spr. dep. - June 1 De Soto NWR - abundant  
 Fall arr. - Sept. 30 Sq. C. NWR - common  
 Fall dep. - Nov. 15  
 Burbank L., S.D. 10/5 4  
 Browns L., Ia. 15/5 4
227. Black-throated Green Warbler, Dendroica virens, Spr., Fall migr.  
 Spr. arr. - April 8 Union Co. - uncommon migrant  
 Spr. dep. - May 27 De Soto NWR - common  
 Fall arr. - Aug. 25 Sq. C. NWR - uncommon  
 Fall dep. - Oct. 17

228. Cerulean Warbler, Dendroica cerulea, breed N. half of area.  
 Spr. arr. - April 18  
 Fall dep. - late Sept.  
 Egg dates - late May through  
           early July  
 Bent - In treetops of heavy deciduous woods, open forested  
 lowlands along a stream, nests in maples, elms and  
 oaks very high up.
229. Blackburnian Warbler, Dendroica fusca, Spr., Fall migr.  
 Spr. arr. - April 28                   Union Co. - uncommon migrant  
 Spr. dep. - June 1  
 Fall arr. - late Aug.  
 Fall dep. - Oct. 14
230. Yellow-Throated Warbler, Dendroica dominica, Breeds in S. half  
 Spr. arr. - April 28  
 Fall dep. - Oct. 14  
 Egg dates - late May to mid June  
 Bent - Breeds in oak or pine with Spanish Moss whenever  
 possible. Breeds W. to central Missouri.
231. Chestnut-sided Warbler, Dendroica pensylvanica, breeds throughout  
 Spr. arr. - April 30                   Union Co. - irregular and  
 Fall dep. - Sept. 23                   uncommon migrant  
 Egg dates - late May to early June   De Soto NWR - uncommon  
   Sq. C. NWR - uncommon  
 Bent - Prefers second-growth and low thickets, nest a foot  
 from ground.
232. Bay-breasted Warbler, Dendroica castanea, Spr., Fall migr.  
 Spr. arr. - May 7                   De Soto NWR - uncommon  
 Spr. dep. - June 4  
 Fall dep. - Oct. 2
233. Blackpoll Warbler, Dendroica striata, Spr., Fall migr.  
 Spr. arr. - May 3                   Union Co. - tolerably common  
 Spr. dep. - Aug. 28                   migrant  
 Fall dep. - Oct. 16                   De Soto NWR - common  
   Sq. C. NWR - uncommon  
   A 18/5 1
234. Pine Warbler, Dendroica pinus, Spr., Fall migr.  
 Spr. arr. - April 17                   Union Co. - rare migrant  
 Fall dep. - Oct. 1
235. Prairie Warbler, Dendroica discolor, breeds throughout  
 Spr. arr. - April 11                   Sq. C. NWR - uncommon  
 Fall dep. - Sept. 23  
 Egg dates - late May thru  
   mid June  
 Bent - cut-over and grown up clearings, deep in hazel  
 thickets 2 or 3 feet up.

236. Palm Warbler, Dendroica palmarum, Spr., Fall migr.  
 Spr. arr. - April 17 Union Co. - rather uncommon  
 Spr. dep. - May 26 migrant  
 Fall arr. - Aug. 31  
 Fall dep. - Sept. 27
237. Ovenbird, Seiurus aurocapillus, breeds throughout.  
 Spr. arr. - April 24 Union Co. - regular and toler-  
 Fall dep. - Oct 26 ably common migrant,  
 Egg dates - May. 16 to July 26 possibly nesting.  
 De Soto NWR - occasional  
 Sq. C. NWR - uncommon  
 Bent - Nests in open woodlands without undergrowth; on the  
 ground (same as whippoorwill and thrushes).  
 Waubaunsie, S. PK., Ia. 26/5 1
238. Kentucky Warbler, Oporornis formosus, breeds in S. of area.  
 Spr. arr. - April 26  
 Fall dep. - Sept. 13  
 Egg dates - May 10 to June 6  
 Bent - In bottomland woods and dense, damp thickets in the  
 undergrowth inches above the ground.
239. Northern Waterthrush Seiurus noveboracensis, Spr., Fall migr.  
 Spr. arr. - April 30 Union Co. - regular and toler-  
 Fall arr. - Aug. 14 ably common  
 Fall dep. - Oct. 13 migrant
240. Louisiana Waterthrush Seiurus motacilla, breeds in S. part of  
 area.  
 Spr. arr. - April 20 Union Co. - regular migrant  
 Fall dep. - Sept. 30  
 Egg dates - May through mid-June  
 Bent - In bottomlands and borders of creeks, preferably near  
 fast-running water (In company with the Prothonotary  
 Warbler) nests low in fallen tree roots or stumps or  
 in stream banks among tree roots.
241. Connecticut Warbler, Oporornis agilis, S. migr. only.  
 Spr. arr. - May 5  
 Fall arr. - Aug. 22  
 Fall dep. - Oct. 1
242. Mourning Warbler, Oporornis philadelphia, Spr., Fall migr.  
 Spr. dep. - May 6 Union Co. - regular but not  
 Fall arr. - Aug. 23 common Spr. migr.  
 Fall dep. - Oct. 8
243. Yellowthroat Geothlypis trichas, breeds throughout  
 Spr. arr. - April 19 Union Co. - very common  
 Fall dep. - Oct. 15 De Soto NWR - abundant  
 Egg dates - late May thru June Sq. C. NWR - common

Bent - In tangled undergrowth along streams or swamp margins; or in the grass near marshes (with swamp sparrows and Marsh wrens), nests low to ground in grass or cattails.

	A 17/5	2
Sq. C. NWR	23/5	1
Sq. C. NWR	24/5	1
Sq. C. NWR	25/5	3
Burbank L., S.D.	1/6	2

244. Yellow-breasted Chat, Icteria virens, breeds throughout.  
 Spr. arr. - May 5 Union Co. - tolerably common  
 Fall dep. - Sept 26 summer resident  
 Egg dates - Mid-May through June  
 Bent - In dense thickets on low, damp ground along streams or swamps, also tangled upland thickets overgrown with briars, nests 2-3 feet up in blackberry, huckleberry, or bushes.
- |            |      |   |
|------------|------|---|
| Sq. C. NWR | 24/5 | 1 |
| Sq. C. NWR | 25/5 | 1 |
245. Hooded Warbler, Wilsonia citrina, breeds at S. edge of study area.  
 Spr. arr. - May 7  
 Fall dep. - Sept. 20  
 Egg dates - May through mid June  
 Bent - In hardwood forests near rivers, nests 2-3 feet from ground in thickets
246. Wilson's Warbler, Wilsonia pusilla, Spr., Fall migr.  
 Spr. arr. - May 7 Union Co. - not common  
 Fall arr. - Aug. 17  
 Fall dep. - Oct. 3
247. Canada Warbler, Wilsonia canadensis, Spr., Fall migr.  
 Spr. arr. - May 18 Union Co. - uncommon migrant  
 Fall arr. - Aug. 13  
 Fall dep. - Oct. 4
248. American Redstart, Setophaga ruticilla, breeds throughout.  
 Spr. arr. - May 3 Union Co. - common migrant  
 Fall dep. - Sept. 16 and regular breeder  
 Egg dates - May 25 to July 21 De Soto NWR - abundant  
 Sq. C. NWR - common  
 A 17/5 1  
 A 18/5 1  
 Sq. C. NWR 24/5 1

#### 18. Ploceidae

249. House Sparrow, Passer domesticus, Introduced year-round residents throughout.  
 Non-migratory Union Co. - abundant  
 Egg dates - May 10 to July 5 De Soto NWR - abundant  
 Sq. C. NWR - abundant



Omaha	Xmas 4092
St. Joseph	Xmas 1128
Yankton	Xmas 308
Sioux City	Xmas 500

## 19. Icteridae

250. Bobolink, Dolichonyx oryzivorus, breeds throughout.  
 Spr. arr. - May 9 Union Co. - uncommon migrant  
 Fall dep. - Oct. 18 not known to nest  
 Egg dates - May 25 to July 11 De Soto NWR - occasional  
 Sq. C. NWR - uncommon  
 Bent - nests in tall-grass meadows in hollows on the ground.  
 Mid-May.
251. Eastern Meadowlark, Sturnella magna, year-round resident  
 sometimes does not winter in N.  
 Spr. arr. (avg) - March 12 Union Co. - not reported in  
 Fall dep. - Nov. 30 Union Co.  
 Egg dates - April 6 to De Soto NWR - common  
 July 1 Sq. C. NWR - common  
 Bent - nests in grasslands, late April.  
 A 5/5 1  
 Sq. C. NWR 23/5 1  
 Burbank L., S.D. 1/6 1
252. Western Meadowlark, Sturnella neglecta, year-round resident.  
 Sometimes does not winter in N.  
 Spr. arr. - Feb. 20 Union Co. - common summer  
 Fall dep. (avg.) - Oct. 30 resident  
 Egg dates - May 2 to June 10 De Soto NWR - abundant  
 Sq. C. NWR - occasional  
 Bent - Nest in meadows, roofed over; early April.  
 Omaha Xmas 332  
 St. Joseph Xmas 215  
 Sioux City Xmas 40  
 Vermillion 1/5 W. Meadowlark  
 Burbank, L., S.D. 1/6 2
253. Yellow-headed Blackbird, Xanthocephalus xanthocephalus, breeds  
 throughout.  
 Spr. arr. (medium) - April 23 Union Co. - common migrant,  
 Fall dep. (avg.) - Sept. 26 may nest  
 Egg dates - May 19 to De Soto NWR - occasional  
 June 12 Sq. C. NWR - uncommon  
 Bent - nests in colonies in marshes, must have 2-4 ft.  
 deep water around cattails (Scirpus, Typha, Phragmites spp.)  
 Nests woven to reeds 3 ft. above water.  
 Burbank L., S.D. 10/5 20  
 Browns L., Ia. 15/5 5  
 Sq. C. NWR 23/5 4  
 Burbank L., S.D. 1/6 6

254. Red-winged Blackbird, Agelaius phoeniceus, year-round resident throughout, sometimes absent in winter in N.  
 Spr. arr. - Feb. 1 Union Co. - common summer resident, usually flocks remain all winter.  
 Fall dep. - Nov. 8 (avg.)  
 Egg dates - June 2 to July 5  
 De Soto NWR - abundant  
 Sq. C. NWR - abundant  
 Bent - Drier edges of marshes, or wet meadows.  
 W 22/9 3  
 W 23/10 5000  
 G 26/10 40  
 G 1/11 200  
 Omaha Xmas 20  
 St. Joseph Xmas 2561  
 Yankton Xmas 52  
 Sioux City Xmas 5  
 Burbank L., S.D. 10/5 30  
 Browns L., Ia. 15/5 5  
 Sq. C. NWR 23/5 20  
 Sq. C. NWR 25/5 6  
 Burbank L., S.D. 1/6 10
255. Orchard Oriole, Icterus spurius, breeds throughout.  
 Spr. arr. - April 23 Union Co. - regular summer resident  
 Fall dep. - Sept. 12  
 Egg dates - May 13 to June 20 De Soto NWR - common  
 Sq. C. NWR - common  
 Bent - nest in cottonwoods and willows near water, or in marshes (Phragmites spp.) semi-pensile.  
 Sq. C. NWR 24/5 1  
 Sq. C. NWR 25/5 1
256. Baltimore Oriole, Icterus galbula, breeds throughout.  
 Spr. arr. - April 26 Union Co. - common summer resident  
 Fall dep. - Oct. 10  
 Egg dates - May 25 to June 14 De Soto NWR - abundant  
 Sq. C. NWR - common  
 Bent - pensile nest near top of large tree, end of May.  
 Browns L., Ia. 15/5 2  
 A 17/5 2  
 A 18/5 5  
 Sq. C. NWR 23/5 3  
 Sq. C. NWR 24/5 1  
 Sq. C. NWR 25/5 1  
 Burbank L. & S.D. 1/6 3
257. Rusty Blackbird, Euphagus carolinus, Spr., Fall migr. in N. winter res. in S.  
 Spr. arr. (median) - March 1 Union Co. - early spring and late fall migrant  
 Spr. dep. - May 16 in flocks  
 Fall Arr. - Aug. 27  
 Fall dep. - Nov. 25 De Soto NWR - occasional  
 Sq. C. NWR - common

- |  |            |         |    |
|--|------------|---------|----|
|  |            | G 18/10 | 3  |
|  | Omaha      | Xmas    | 28 |
|  | St. Joseph | Xmas    | 6  |
258. Brewer's Blackbird, Euphagus cyanocephalus, Spr., Fall migr. (may breed).  
 Spr. arr. - March 9 Union Co. - reported in spr.  
 Spr. dep. - May 19  
 Fall arr. - Aug. 20  
 Fall dep. (avg.) - Nov. 13  
 Egg dates - May 25 to June 4  
 Bent - nest in trees near streams.  
 Omaha Xmas 75
259. Common Grackle, Quiscalus quiscula, breeds in N., year round in S.  
 Spr. arr. - Feb. 10 De Soto NWR - common  
 Fall dep. - Dec. 26 Sq. C. NWR - common  
 Egg dates - May 10 to June 16  
 Bent - nest anywhere- trees, bushes, marshes, cavities.  

Omaha	Xmas	49
St. Joseph	Xmas	49
Sioux City	Xmas	25
	A 5/4	20
Burbank L., S.D.	10/5	5
Browns La, Ia.	15/5	20
	A 17/5	6
Sq. C. NWR	23/5	10
Burbank L., S.D.	1/6	4
260. Brown-headed Cowbird, Molothrus ater, breeds throughout.  
 Spr. arr. - Feb. 21 Union Co. - common summer  
 Fall dep. - Dec. 3 resident  
 Egg dates - April 26 to July 11 De Soto NWR - abundant  
 Sq. C. NWR - common  
 Bent - wholly nest usually upon yrannidae,  
 Fringillidae, Virionidae, Parulidae.  

Omaha	Xmas	127
St. Joseph	Xmas	94
	A 5/5	12
Browns L., Ia.	15/5	100
Sq. C. NWR	25/5	2
Burbank L., S.D.	1/6	4
20. Thraupidae
261. Scarlet Tanager, Piranga olivacea, breeds throughout  
 Spr. arr. - April 27 Union Co. - regular migrant  
 Fall dep. - Sept. 29 and summer resi-  
 Egg dates - May 28 to Aug. 2 dent  
 Sq. C. NWR - occasional  
 Bent - nests on horizontal tree branch 20 ft. from ground  
 (often oak).

262. Summer Tanager, Piranga rubra, breeds central and S.  
 Spr. arr. - April 30 Sq. C. NWR - occasional  
 Fall dep. - Sept. 26  
 Egg dates - March 24 to June 5  
 Bent - nest in Pine and scrub oaks

## 21. Fringillidae

263. Cardinal, Richmondia cardinalis, year-round throughout.  
 non-migratory Union Co. - fairly common  
 Egg dates - April 15 to July 28 permanent resident  
 De Soto NWR - common  
 Sq. C. NWR - abundant  
 Bent - few nests in trees, mainly low, tangled shrubbery  
 and thickets within a wide variety of habitats.  
 Omaha Xmas 207  
 St. Joseph Xmas 89  
 Yankton Xmas 1  
 Sioux City Xmas 19  
 Sq. C. NWR 24/5 2  
 Waubaunsee, S.P.K., Ia. 26/5 1
264. Rose-breasted Grosbeak, Pheucticus ludovicianus, breeds throughout  
 Spr. arr. - April 20 Union Co. - tolerably common  
 Fall dep. - Sept. 25 summer resident  
 Egg dates - May 23 to June 7 De Soto NWR - abundant  
 Sq. C. NWR - occasional  
 Bent - prefer wooded borders of swamps and streams, and dense  
 growth of understory and bushes along ecotone.  
 Browns L., Ia. A 5/5 1  
 15/5 1  
 A 17/5 2  
 A 18/5 5  
 Sq. C. NWR 24/5 1
265. Blue Grosbeak, Guiraca caerulea, breeds throughout.  
 Spr. arr. - May 13 Union Co. - uncommon summer  
 Fall dep. - Sept. 19 resident  
 Egg dates - May 5 to Aug. 30  
 Bent - nests at medium height in small trees among thickets  
 along streams and ecotones.
266. Indigo Bunting, Passerina cyanea, breeds throughout.  
 Spr. arr. - April 29 Union Co. - tolerably common  
 Fall dep. - Oct. 8 summer resident  
 Egg dates - May 27 to Aug. 19 De Soto NWR - common  
 Sq. C. NWR - common  
 Bent - always nest near water in riparian woodland or fresh-  
 water marshes.  
 Sq. C. NWR 24/5 2  
 Sq. C. NWR 25/5 2

267. Lazuli Bunting, Passerina amoena  
 Spr. - May 15 Union Co. - a very rare migrant  
 Fall - Sept. 13
268. Painted Bunting, Passerina ciris, occasional in S. in summer.  
 Spr. arr. - May 19 Sq. C. NWR - rare  
 Fall dep. - Sept. 6  
 Egg dates - May 18 to May 31  
 Bent - nests near the ground in bushes and thick grassy areas.
269. Dickcissel, Spiza americana, breeds throughout.  
 Spr. arr. - May 10 Union Co. - common summer  
 Fall dep. - Oct. 1 resident  
 Egg dates - May 17 - Aug. 5 De Soto NWR - abundant  
 Sq. C. NWR - common  
 Bent - nests on the ground in meadows and pastures.  
 Sq. C. NWR 23/5 1  
 Sq. C. NWR 24/5 3  
 Sq. C. NWR 25/5 2
270. Evening Grosbeak, Hesperiphona vespertina, irregular winter residence.  
 Fall arr. - Oct. 29 Union Co. - uncommon winter  
 Spr. dep. - May 15 visitor  
 Sioux City Xmas 1  
 Vermillion, S.D. Several reported early May
271. Purple Finch, Carpodacus purpureus, winter resident throughout.  
 Spr. dep. - May 2 Union Co. - regular early  
 Fall arr. - Aug. 7 spring and late  
 Fall migrant  
 De Soto NWR - occasional  
 Sq. C. NWR - rare  
 Omaha Xmas 32  
 St. Joseph Xmas 2  
 Sioux City Xmas 3
272. Common Redpoll, Acanthis flammea, winter resident.  
 Spr. dep. - March 19 Union Co. - erratic winter visitor  
 Fall arr. - Oct. 4
273. Pine Siskin, Spinus pinus, winter resident, a few may breed.  
 Spr. arr. - March 25 Union Co. - tolerably common  
 Spr. dep. - May 24 winter visitor and  
 Fall arr. - Oct. 30 occasional summer  
 Fall dep. - Nov. 2 resident  
 Egg Dates - May 2 to July 15  
 Bent - almost colonial nesting in conifers or cedars  
 Omaha Xmas 3  
 St. Joseph Xmas 26  
 Sioux City Xmas 6

274. American Goldfinch, Spinus tristis, year-round resident.  
 Egg Dates - July 5 to Sept. 17 Union Co. - tolerably common  
 summer resident  
 and winter visitor  
 De Soto NWR - abundant  
 Sq. C. NWR - common  
 Bent - nests late, always close to thistle seed (food)  
 usually near swamp, high in trees (willows).  
 W 22/9 1  
 Omaha Xmas 115  
 St. Joseph Xmas 50  
 Sioux City Xmas 18  
 Browns L., Ia. A 5/5 2  
 15/5 3  
 A 17/5 1  
 Sq. C. NWR 23/5 1  
 Sq. C. NWR 24/5 1  
 Sq. C. NWR 25/5 1
275. Red Crossbill, Loxia curvirostra, sporadic winter resident.  
 Fall arr. - Oct. 6 Union Co. - casual winter visitor  
 Spr. dep. - May 2 Sq. C. NWR - abundant  
 Sioux City Xmas 4
276. White-winged Crossbill, Loxia leucoptera, sporadic winter  
 resident.  
 Fall arr. - Nov. 10 Sq. C. NWR - abundant  
 Spr. dep. - March 6
277. Rufous-Sided Towhee, Pipilo erythrophthalmus, year-round  
 Spr. arr. - March 27 Union Co. - common summer  
 Fall dep. - Oct. 18 resident  
 Egg Dates - May 1-Aug. 11 De Soto NWR - abundant  
 Sq. C. NWR - common  
 Bent - thickets at edge of woods.  
 Omaha Xmas 2  
 St. Joseph Xmas 2  
 Browns L., Ia. A 5/5 1  
 15/5 1
278. Lark Bunting, Calamospiza melanocorys  
 Spr. arr. - May 3 Union Co. - an unusual spring  
 Fall arr. - Aug. 12 or summer visitor  
 Fall dep. - Oct. 15  
 Egg Dates - July 20  
 Bent - nests on the ground, in pastures along fence lines  
 Bent - Known to breed in S.W. Minnesota irregularly.

279. Savannah Sparrow, Passerculus sandwichensis, breeds N., Spr.,  
 Fall migr. elsewhere  
 Spr. arr. - March 27 Union Co. - tolerably common  
 Fall dep. - Nov. 2 Spring & Fall  
 Egg Dates - May 6 to June 20 migrant  
 Sq. C. NWR - uncommon  
 Bent - nests on the ground in grassy vegetation and up-  
 land meadows
280. Grasshopper Sparrow, Ammodramus savannarum, breeds throughout  
 Spr. arr. - May 9 Union Co. - tolerably common  
 Fall dep. - Nov. 4 summer resident  
 Egg Dates - May 18 to July 10 De Soto NWR - uncommon  
 Sq. C. NWR - uncommon  
 Bent - nests in base of clumps of grass  
 A 5/5 1
281. Le Conte's Sparrow, Passerherbulus caudacutus, Spr., Fall migr.  
 Spr. arr. - April 11 Union Co. - uncommon migrant  
 Spr. dep. - April 21 Sq. C. NWR - occasional  
 Fall arr. - Sept. 25  
 Fall dep. - Oct. 5
282. Henslow's Sparrow, Passerherbulus henslowii, breeds throughout.  
 Spr. arr. - May 9 De Soto NWR - occasional  
 Fall dep. - Nov. 1 Sq. C. NWR - uncommon  
 Egg Dates - May 22 to July 7  
 Bent - nests in weedy prairies and meadows with dense cover
283. Sharptailed Sparrow, Ammodramus caudacuta, Spr., Fall migr.  
 Spr. arr. - April 29  
 Spr. dep. - May 15  
 Fall arr. - Sept. 21  
 Fall dep. - Oct. 20
284. Vesper Sparrow, Pooecetes gramineus, breeds throughout.  
 Spr. arr. - April 25 Union Co. - tolerably common  
 Spr. dep. - April 2 migrant and  
 Fall arr. - Oct. 2 probable breeder  
 Fall dep. - Oct. 15  
 Bent - nests in old, weedy fields.
285. Lark Sparrow, Chondestes grammacus, breeds throughout  
 Spr. arr. - May 1 Union Co. - uncommon summer  
 Fall dep. - Aug. 16 resident  
 Egg Dates - May 5 to July 4 De Soto NWR - uncommon  
 Sq. C. NWR - occasional  
 Bent - nest in meadows or low shrubs (red cedar).  
 A 5/5 2  
 A 17/5 2

286. Slatecolored Junco, Junco hyemalis, winter resident throughout  
 Fall arr. - Sept. 24 Union Co. - common Spr., Fall  
 Spr. dep. - April 22 migr. and regular  
 winter visitor  
 De Soto NWR - common  
 Sq. C. NWR - common  
 Omaha Xmas 794  
 St. Joseph Xmas 315  
 Sioux City Xmas 302  
 Yankton, S.D. Xmas 4  
 A 5/4 3
287. Tree Sparrow, Spizella arborea, winter resident throughout  
 Spr. dep. - Apr. 23 Union Co. - very common Spr.  
 Fall arr. - Oct. 15 and Fall migr. and  
 winter visitor  
 De Soto NWR - common  
 Sq. C. NWR - common  
 Omaha Xmas 862  
 St. Joseph Xmas 372  
 Yankton, S.D. Xmas 205  
 Sioux City Xmas 577
288. Chipping Sparrow, Spizella passerina, breeds throughout  
 Spr. arr. - May 12 Union Co. - regular summer  
 Fall dep. - Oct. 10 resident  
 Egg Dates - May 1 to Aug. 20 Sq. C. NWR - uncommon  
 Vermillion Many in early May
289. Clay-colored Sparrow, Spizella pallida, breeds throughout  
 Spr. arr. - Apr. 30 Union Co. - tolerably common  
 Fall dep. - Oct. 17 migrant  
 Egg Dates - May 22 to June 13 Sq. C. NWR - occasional  
 Bent - Breeds on shrubby hillsides, swamps, and poplar-  
 willow bluffs.
290. Field Sparrow, Spizella pusilla, breeds throughout  
 Spr. arr. - April 10 Union Co. - tolerably common  
 Fall dep. - Oct. 17 summer resident  
 Egg Dates - May 12 to July 30 De Soto NWR - abundant  
 Sq. C. NWR - common  
 Bent - nests low on small bushes of deciduous underbrush.  
 St. Joseph Xmas 4  
 A 5/5 1  
 A 17/5 1
291. Harris' Sparrow, Zonotrichia querula, Spr., Fall migr.  
 Spr. arr. - March 29 Union Co. - common migrant and  
 Spr. dep. - May 15 occasional winter  
 Fall arr. - Oct. 8 visitor  
 Fall dep. - Nov. 11 De Soto NWR - common  
 Sq. C. NWR - uncommon



- |            |          |
|------------|----------|
| Omaha      | Xmas 21  |
| St. Joseph | Xmas 44  |
| Sioux City | Xmas 32  |
|            | A 5/5 2  |
|            | A 17/5 1 |
292. White-crowned Sparrow, Zonotrichia leucophrys, Spr., Fall migr.  
 Spr. arr. - May 5 Union Co. - regular Spr.,  
 Spr. dep. - May 19 Fall migrant  
 Fall arr. - Oct. 15 De Soto NWR - uncommon  
 Fall dep. - Oct. 30 Sq. C. NWR - common  
 St. Joseph Xmas 2  
 Sioux City Xmas 1
293. White-throated Sparrow, Zonotrichia albicollis, Spr., Fall migr.  
 Spr. arr. - April 26 Union Co. - almost common Spr.,  
 Spr. dep. - May 27 Fall migrant  
 Fall arr. - Sept. 30 De Soto NWR - uncommon  
 Fall dep. - Oct. 25 Sq. C. NWR - common  
 Omaha Xmas 2  
 St. Joseph Xmas 5  
 A 18/5 1
294. Fox Sparrow, Passerella iliaca, Spr. Fall migr. in N., winter  
 resident in S.  
 Spr. arr. - March 22 Union Co. - uncommon Spr.,  
 Spr. dep. - April 24 Fall migrant  
 Fall arr. - Sept. 24 De Soto NWR - occasional  
 Fall dep. - Nov. 5 Sq. C. NWR - uncommon  
 Omaha G 18/10 1  
 Xmas 1
295. Lincoln's Sparrow, Melospiza lincolni, Spr., Fall migr.  
 Spr. arr. - April 12 Union Co. - tolerably common  
 Spr. dep. - May 20 Spr., Fall migrant  
 Fall arr. - Aug. 31 Sq. C. NWR - occasional  
 Fall dep. - Nov. 4 Omaha Xmas 6
296. Swamp Sparrow, Melospiza georgiana, year-round resident throughout.  
 Spr. arr. - May 1 Union Co. - irregular migrant,  
 Fall dep. - Oct. 26 almost common some  
 Egg Dates - May 18 to June 17 years, and an un-  
 common summer resident  
 Sq. C. NWR - uncommon  
 Bent - nests in swamps on marsh grasses, sedges and cattails.  
 Omaha Xmas 1  
 St. Joseph Xmas 4

297. Song Sparrow, Melospiza melodia, year-round resident  
 Spr. arr. - March 25 Union Co. - common migrant  
 Fall dep. - Oct. 12 not know to breed  
 Egg Dates - April 22 to Aug. 7 De Soto NWR - common  
 Sq. C. NWR - common  
 Bent - Breeds in wetlands, cattail swamps, the banks of  
 streams, wet meadows. Half the nests on the  
 sedges and half on the ground.  
 Omaha Xmas 72  
 St. Joseph Xmas 28  
 Sioux City Xmas 5  
 Browns L., Ia. 15/5 1  
 Sq. C. NWR 25/5 1
298. Lapland Longspur, Calcarius lapponicus, winter resident  
 throughout  
 Spr. dep. - April 4 Union Co. - erratic winter visitor  
 Fall arr. - Oct. 26  
 St. Joseph Xmas 40
299. Smith's Longspur, Calcarius pictus, uncommon winter resident  
 Spr. dep. - May 6  
 Fall arr. - Mid Nov.
300. Chestnut-collared Longspur, Calcarius ornatus, Spr., Fall migr.  
 Spr. arr. - Apr. 30  
 Fall arr. - Nov. 11  
 Fall dep. - Oct. 12
301. Snow Bunting, Plectrophenax nivalis, winter resident throughout  
 Spr. dep. - March 18 Union Co. - uncommon winter  
 Fall arr. - Oct. 9 visitor  
 De Scto NWR - rare  
 Yankton, S.D. Xmas 1

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Part B - Census of Breeding Birds in the Floodplain Plant Communities from Yankton, South Dakota to Rulo, Nebraska.

EXPLANATION OF TABLES

At each of the floodplain plant community study sites chosen by the plant section of the Missouri River Environmental Inventory a careful census was taken during the breeding season of all birds and nests in a measured area.

Since the plant survey describes the makeup of these communities precisely and the extensiveness of each community in the study area, knowing the density of breeding birds in these sites might allow an estimate of the total number of birds in the overall study area.

Birds were identified by sight and sound, and were attracted to the observer by an owl decoy and by playing recorded owl calls on a loudspeaker. With marsh birds the calls of each species presumed to be in the marsh were played back several times near sunset-an answering call proved the birds present.

Nests were identified as to species by the "anxious" parents nearby or by using a nest key field guide.

A list of selected reference on the relationship of birds nesting to vegetation is appended.

TABLE 1

## WOODED SITES

1A

YANKTON AREA Cedar Co., Nebr. <u>SPECIES</u>	40,000 M <sup>2</sup> <u>NUMBER SEEN</u>	21 June, 1973 <u>M<sup>2</sup> PER BIRD</u>
Bobwhite	2	20,000
Mourning Dove	4	10,000
Chimney Swift	5	8,000
Flicker	2	20,000
Eastern Kingbird	2	20,000
Least Flycatcher	1	40,000
Blue Jay	4	10,000
Black-capped chickadee	3	13,000
Housewren	3	13,000
Catbird	3	13,000
Brown Thrasher	1	40,000
Robin	4	10,000
Warbling Vireo	1	40,000
Yellow Warbler	2	20,000
Yellow Throat	2	20,000
Baltimore Oriole	3	13,000
Common Grackle	3	13,000
Rose-breasted grosbeak	2	20,000
Indigo Bunting	2	20,000
American Goldfinch	1	40,000

1B

HILINE  
Clay Co., S.D.

20,000 M<sup>2</sup>

20 June, 1973

Mourning Dove	4	5,000
Yellow-billed Cuckoo	1	20,000
Yellow-shafted Flicker	1	20,000
Red-bellied Woodpecker	1	20,000
Tree Swallow	2	10,000
Blue Jay	4	5,000
Black-capped Chickadee	2	10,000
House Wren	5	4,000
Brown Thrasher	4	5,000
Robin	4	5,000
Wood Thrush	4	5,000
Baltimore Oriole	2	10,000
Rose-breasted Grosbeak	2	10,000
American Goldfinch	3	6,600

Bluejay nest

Brown thrasher nest with one egg and 2 young

Wood thrush nest with one egg



1C

SNYDER BEND

3600 M<sup>2</sup>

5 July, 1973

Woodbury Co., Iowa

Mourning Dove	11	327
Yellow-shafted flicker	1	3600
Eastern Kingbird	3	1200
Blue Jay	11	327
Black-capped chickadee	3	1200
House Wren	6	600
Robin	8	450
Yellow Warbler	4	900
Yellowthroat	5	720
Baltimore Oriole	2	1800
Common Grackle	20	180

Mourning dove nests 1) with one egg

2) no egg but occupied

1D

LEWIS & CLARK  
State Park, IowaN. DRIVE - 1500 M<sup>2</sup>

29, June, 1973

Mourning Dove	5	300
Blue Jay	4	375
House Wren	2	750
Robin	6	250
Warbling Vireo	1	1500
Yellow Warbler	1	1500
Yellowthroat	1	1500
Orchard Oriole	1	1500
Baltimore Oriole	1	1500
Common Grackle	23	65
Rose-breasted grosbeak	1	1500

1 Robin's nest

1 Dove's nest (occupied)

1 House sparrow nest

1E

LEWIS & CLARK  
State Park, IowaS. DRIVE - 1700 M<sup>2</sup>

29 June, 1973

Bobwhite	1	1700
Mourning Dove	8	212
Yellow-shafted Flicker	1	1700
Red-headed woodpecker	1	1700
Western Kingbird	1	1700
Blue Jay	4	425
Black-capped chickadee	1	1700
House Wren	4	425
Robin	9	188
Baltimore Oriole	2	850
Common Grackle	5	340
Rose-breasted Grosbeak	2	850

TABLE 2  
MARSHES

2A	<u>Yankton</u> - (Typha)	3000 M <sup>2</sup>	2 July, 1973
	Piedbilled Grebe	2	1500
	American Bittern	1	3000
	Mallard	2	1500
	Blue-winged Teal	2	1500
	Sora	1	3000
	Yellow-headed blackbird	2	1500
	Red-winged blackbird	6	500

2B	<u>Snyder Bend</u> - (Typha)	300 M <sup>2</sup>	5 July, 1973
	Blue-winged teal	2	1500
	Long-billed marsh wren	1	3000
	Red-winged blackbird	22	130

2C	<u>De Soto Bend</u> - (Typha)		28 June, 1973
----	-------------------------------	--	---------------

This marsh has dried up. No birds were seen breeding or feeding, although the Typha was still alive.

	Squaw Creek - (Nelumbo)	2800 M <sup>2</sup>	26 June, 1973
	Yellow-headed blackbirds	2	1400
	Red-winged Blackbird	3	930

(The above birds seemed only to be feeding in the Nelumbo lutea; they were transient and did not return or defend territory.)

2D Squaw Creek (Saggitaria)

26 June, 1973

No birds were seen feeding or breeding in this area. The refuge manager states that Saggitaria latifolia grows above the surface of the water too late to be used as a nesting area.

2E Squaw Creek (Typha)2100 M<sup>2</sup>

26 June, 1973

Pied-billed grebe	1	2100
Green Heron	1	2100
Blue-winged Teal	1	2100
King Rail	1	2100
Yellow-headed blackbird	1	2100
Red-winged blackbird	8	260

1 Pied-billed Grebe's nest

1 fledgling red-winged blackbird

1 red-winged blackbird's nest with 3 fledglings in juvenal plumage  
and one egg.

2F Squaw Creek (Nelumbo)2800 M<sup>2</sup>

26 June, 1973

Yellow-headed Blackbird	2	1400
Red-winged Blackbird	3	930

(The above birds seemed only to be feeding in the Nelumbo lutea; they were transient and did not return or defend territory.)

1F

WILSON ISLAND	3200 M <sup>2</sup>	28 June, 1973
So. of Desoto N.W.R., Iowa		
Bobwhite	2	1600 M <sup>2</sup> /bird
Mourning Dove	6	533
Yellow-billed Cuckoo	1	3200
Yellow-shafted Woodpecker	1	3200
Red-headed Woodpecker	1	3200
Hairy Woodpecker	1	3200
Eastern Kingbird	1	3200
Eastern Wood Peewee	1	3200
Blue Jay	1	3200
Black-capped Chickadee	2	1600
House Wren	1	3200
Catbird	2	1600
Brown Thrasher	1	3200
Robin	3	1060
American Redstart	7	460
Baltimore Oriole	1	3200
Common Grackle	4	800
Brown-headed Cowbird	4	800
Rose-breasted Grosbeak	2	1600
American Goldfinch	1	3200
Rufous-sided Towhee	2	1600
Song Sparrow	1	3200

Yellow-shafted Flicker's nest (occupied).

Catbird nest (occupied).

1G

PLATTSMOUTH  
N.W. Ref., Cass Co. Nebr.

5200 M<sup>2</sup>

27 June, 1973

Yellow-billed Cuckoo	1	5200 M <sup>2</sup> / bird
Red-headed Woodpecker	1	5200
Hairy Woodpecker	1	5200
Eastern Kingbird	1	5200
Bank Swallow	4	1300
Black-capped Chickadee	4	1300
House Wren	2	2600
Catbird	4	1300
Robin	4	1300
Yellow Warbler	1	5200
American Redstart	1	5200
Red-winged Blackbird	1	5200
Orchard Oriole	2	2600
Baltimore Oriole	5	1040
American Goldfinch	1	5200
Song Sparrow	1	5200

1 Catbird's nest (occupied)

1H

NEBRASKA CITY, NEB.	2550 M <sup>2</sup>	27 June, 1973
Wood Duck	1	2550 M <sup>2</sup> /bird
Bobwhite	1	2550
Mourning Dove	10	255
Yellow-shafted Flicker	1	2550
Eastern Kingbird	3	850
House Wren	1	2550
Catbird	4	640
Brown Thrasher	1	2550
Robin	3	850
Red-winged Blackbird	5	510
Orchard Oriole	3	850
Common Grackle	10	255
Brown-headed Cowbird	1	2550
Cardinal	1	2550
Rose-breasted Grosbeak	1	2550
Indigo Bunting	2	1275
American Goldfinch	1	2550



11

BROWNVILLE, IOWA	6000 M <sup>2</sup>	27 June, 1973
Turkey Vulture	1	6000 M <sup>2</sup> /bird
Yellow-shafted Flicker	4	1500
Red-headed Woodpecker	2	3000
Cliff Swallow	20	300
Blue Jay	2	3000
Black-capped Chickadee	4	1500
Tufted Titmouse	1	6000
House Wren	1	6000
Catbird	1	6000
Robin	2	3000
Yellow Warbler	2	3000
Yellowthroat	1	6000
House Sparrow	8	750
Baltimore Oriole	4	1500
Common Grackle	11	545
Brown-headed Cowbird	2	3000
Rose-breasted Grosbeak	1	6000
Indigo Bunting	1	6000

25 Cliff Swallows nests (half occupied)

(House Sparrow has taken over several nests)

1 Robin's nest

1J

SQUAW CREEK N.W.R.  
Holt Co, Md.3000 M<sup>2</sup>

27 June, 1973

Ring-necked Pheasant	1	3000 M <sup>2</sup> /bird
Yellow-billed Cuckoo	3	1000
Red-bellied Woodpecker	2	1500
Red-headed Woodpecker	1	3000
Hairy Woodpecker	3	1000
Downy Woodpecker	1	3000
Eastern Wood Peewee	1	3000
Blue Jay	1	3000
Black-capped Chickadee	1	3000
House Wren	1	3000
Bell's Virco	1	3000
Yellow Warbler	2	1500
Myrtle Warbler	1	3000
Yellowthroat	3	1000
Yellow-breasted Chat	1	3000
Orchard Oriole	8	375
Baltimore Oriole	2	1500
Common Grackle	14	210
Brown-headed Cowbird	2	1500
Cardinal	2	1500
Indigo Bunting	2	1500
American Goldfinch	1	3000

1 Common Grackle's nest

## SELECTED REFERENCES ON THE RELATIONSHIP OF BIRDS' NESTING TO VEGETATION

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THE FALL MIGRATION OF ANSERIFORMES AND CHARADRIIFORMES  
DOWN THE MISSOURI RIVER 1972

EXPLANATION OF TABLES AND FIGURES

The migration of waterfowl and shorebirds along the Missouri River Corridor of the Mississippi Flyway is one of the most important ornithological occurrences in the study area. This event is shown here (Tables 1-42) first by total numbers of birds seen per week for the Fall of 1972 at Lake Andes NWR, S.D., Vermillion, S.D., DeSoto NWR, Iowa, and Squaw Creek NWR, Missouri. The numbers given for the refuges are from their unpublished weekly bird counts. Numbers labeled "F.L., S.C." were collected for me by Mr. Frank Lawhon at Squaw Creek. "F.L., Br.L." indicates sightings made at Brown's Lake, Missouri, which is close to Squaw Creek NWR. Observations at Vermillion were made by the author.

Figures 1 and 2 show an overall view of the migration down the Missouri River. To observe only significant movements, numerical weekly data was converted into a percentage score of the maximum number of a species seen in a study site during the four month study period. The maximum number was then converted to 100%. A change of 30% from one week to another was considered an arrival or departure.

Each box represents a site-week, that is, the arrivals and departures which occurred at a particular site on a particular week. A species name in the top of the box indicates an arrival of that species at that site during that week. A species name in the bottom of a box indicates a departure from that site during that week.

A line connecting an arrival of a species in one box with a departure of the same species in a box immediately to the right is used to emphasize the fact that this species had a departure in the first week following an arrival.

The large letters between boxes stand for weather conditions which are possible causes for departure. They show the weather conditions which were present at some time during the week between the bird counts whose results are shown on either side of the large letters.

<u>Symbol</u>	<u>Weather Condition</u>
H	Low pressure cell replaced by high with NW wind (established by weather map)
F	Passage of a cold front
C	A cold wave (monthly minimum temperature)
W	Greater than 17 mph winds, NW
S	At least 2 inches of snow cover on the ground

A subscript by the symbol indicates that the condition occurred that many times during the week. No subscript means that the condition occurred once during the week.

This material was also used in the thesis by James Lynk. (The Fall Migration of Anseriformes and Charadriiformes of the Missouri River, M.A. Thesis, University of South Dakota, 1973.)

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WHISTLING SWAN TABLE I

	September			October				November				December					
	8	15	22	29	6	13	20	27	3	10	17	24	1	8	15	22	29
LAKE ANDES NWR																	
VERMILLION AREA																	
DE SOTO BEND NWR																	
SQUAW CREEK NWR									0	6	1						
								-	1	0							

F.L., S.C.

TABLE II

CANADA GOOSE																		
LAKE ANDES NWR																		
VERMILLION AREA																		
DE SOTO BEND NWR																		
SQUAW CREEK NWR																		
	0	60	0	1	50	60	50	0	0	10	-	114	-	13	-	6500	5000	700
	0	25	50	65	125	1800	8615	6625	-	4360	-	30	200	300	25	0	1	2
	35	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

\*\*\*\* WHITE-FRONTED GOOSE TABLE III

	September			October			November			December							
	8	15	22	29	6	13	20	27	3	10	17	24	1	8	15	22	29
LAKE ANDES NWR				0	500	0	0	0	110	0							
VERMILLION AREA																	
DE SOTO BEND NWR									0	0	3	0					
SQUAW CREEK NWR				0			0	0		125	-	0	200	-			0

\*\*\*\* SNOW GOOSE TABLE IV

	September			October			November			December							
	8	15	22	29	6	13	20	27	3	10	17	24	1	8	15	22	29
LAKE ANDES NWR																	
VERMILLION AREA				14	0	20	6	0	0	690	50	0	35	0			
DE SOTO BEND NWR				17	1000	19000	145000	19500	23000	27000	52000	98000	12000	9000	1000	1500	20
SQUAW CREEK NWR				110	-	40855	151460	173760	-	52250	-	8550	32600	-	27	600	-

\*\*\*\* MALLARD

TABLE V

	September		October				November				December						
	8	15	22	29	6	13	20	27	3	10	17	24	1	8	15	22	29
LAKE ANDES NWR	1750	2250	5090	5050	5370	11480	46500	93600	201390	—	117000	151865	45925	40000	40000	50000	8000
VERMILLION AREA	20	0	1	0	0	4	1	59	30	48	0	0	14	0	0	0	0
DE SOTO BEND NWR	30	30	35	40	825	1700	10000	22725	34775	49800	25000	122500	52000	35000	20000	25000	50000
SQUAW CREEK NWR	272	20	678	150	46000	—	—	101700	101700	130500	—	50000	122000	31000	—	—	—
peak mo. avg. F.L., S.C., Br.L.	20	20	15	150	0	—	—	0	60000	20000	18	10	4	31000	—	—	—

\*\*\*\* BLACK DUCK

TABLE VI

	September		October				November				December						
	8	15	22	29	6	13	20	27	3	10	17	24	1	8	15	22	29
LAKE ANDES NWR																	
VERMILLION AREA							1										
DE SOTO BEND NWR						3	2	2	2	2	—	2	—	2	—	—	—
SQUAW CREEK NWR					4			15	8			23	0	2	—	—	—
peak mo. avg. F.L., S.C., Br.L.								—	2	2	—	2	—	2	—	—	—





\*\*\*\* PINTAIL

TABLE IX

	September		October			November			December								
	8	15	22	29	6	13	20	27	3	10	17	24	1	8	15	22	29
LAKE ANDES NWR			50	430	40	0	80	580	80	50	0	1					
1000		0															
VERMILLION AREA			66	0	0	0	100	0	0	0	0	0	0	0	0	0	0
0		0															
DE SOTO BEND NWR			0	3	20	0	5	0	0	0	1	0	0	0	1	1	1
0		0															
SQUAW CREEK NWR				13560	12200	41875	6000	5566	1500	750	0	1500	200	50	0	0	0
mo. avg. 6500																	
F.L., S.C. 60		1250	350	100	0	0	0	0	0	0	0	0	0	0	0	0	0
" , Br.L.																	

\*\*\*\* GREEN WINGED TEAL

TABLE X

	September		October			November			December								
	8	15	22	29	6	13	20	27	3	10	17	24	1	8	15	22	29
LAKE ANDES NWR			0	0	0	0	20	40	20	20	0	0	0	0	0	0	0
VERMILLION AREA			0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
10		0															
DE SOTO BEND NWR			0	8	12	10	5	20	5	5	0	5	0	0	0	0	0
0		0															
SQUAW CREEK NWR				105	12200	41875	6000	5566	3000	260	0	50	8	0	0	0	0
mo. avg. 80																	
F.L., S.C. 18		500	0	60	0	0	0	0	0	0	0	0	0	0	0	0	0
" , Br.L.																	

\*\*\*\* BLUE WINGED TEAL

TABLE XI

	September		October				November				December						
	8	15	22	29	6	13	20	27	3	10	17	24	1	8	15	22	29
LAKE ANDES NWR				3930	230	590	30	0	0	0	0	0	0	0	0	0	0
6100			2300														
VERMILLION AREA			14	0	0	5	0	0	0	69	0	0	0	0	0	0	0
79		120															
DE SOTO BEND NWR				100	75	25	10	0	0	0	0	0	0	0	0	0	0
75		150	250														
SQUAW CREEK NWR					4550	7550	152	0	0	155	0	0	0	0	0	0	0
200				8	0	0	0	0	0	0	0	0	0	0	0	0	0
mo. avg. 1200																	
F.L., S.C. 15		300	220														
" , Br.L. 0																	

\*\*\*\* SHOVELER

TABLE XII

	September		October				November				December						
	8	15	22	29	6	13	20	27	3	10	17	24	1	8	15	22	29
LAKE ANDES NWR				1780	60	260	390	820	550	0	0	0	0	0	0	0	0
1280		900	1430														
VERMILLION AREA				0	0	12	3	0	0	0	0	0	0	0	0	0	0
18		30															
DE SOTO BEND NWR																	
40																	
SQUAW CREEK NWR					850	3000	275	1000	275	9	110	3	7	0	0	0	0
30				0	10	0	135	250	135	25	750	750	1000	250	27	27	27
F.L., S.C. 3		60	0														
" , Br.L. 0																	

\*\*\*\* WOOD DUCK

TABLE XIII

	September			October			November			December							
	8	15	22	29	6	13	20	27	3	10	17	24	1	8	15	22	29
LAKE ANDES NWR							0	10	10	0							
VERMILLION AREA				0	0	0	1	0									
DE SOTO BEND NWR			80	75	40	50	30	25	100	20							
SQUAW CREEK NWR			22	0	37	0	-	-	55	10	22	0	0	1	-		
peak																	
mo. avg.			14														
F.L., S.C.			2														
" , Br.L.																	

TABLE XIV

\*\*\*\* REDHEAD

	September			October			November			December							
	8	15	22	29	6	13	20	27	3	10	17	24	1	8	15	22	29
LAKE ANDES NWR				0	230	610	780	750	210	-	20	0					
VERMILLION AREA			8	0	0	0	3	0									
DE SOTO BEND NWR								1	2	0	35	3					
SQUAW CREEK NWR								85	7	14							
peak																	
mo. avg.					18				9	17							
F.L., S.C.					1				1	1							
" , Br.L.					0				1	1							

\*\*\*\* RING-NECKED DUCK

TABLE XV

	September			October				November				December					
	8	15	22	29	6	13	20	27	3	10	17	24	1	8	15	22	29
LAKE ANDES NWR						80	0	100	230	-	0						
VERMILLION AREA							1	0	12								
DE SOTO BEND NWR				0	15	15	10	27	25	0	10	0					
SQUAW CREEK NWR				85	5	10	0	5	50	12	5	4	0	0			
peak				-	0	0	-	0	0	0	0	0	0	0	0	0	0
mo. avg.				0	0	0	0	0	0	0	0	0	0	0	0	0	0
3.L., S.C.				0	0	0	0	0	0	0	0	0	0	0	0	0	0
" , Br.L.				0	0	0	0	0	0	0	0	0	0	0	0	0	0

\*\*\*\* CANVASBACK

TABLE XVI

	September			October				November				December					
	8	15	22	29	6	13	20	27	3	10	17	24	1	8	15	22	29
LAKE ANDES NWR				0	50	80	310	560	390	-	56	9	2	0			
VERMILLION AREA					0	26	6	0	0								
DE SOTO BEND NWR				0	0	0	0	1	1	1	11	5	0				
SQUAW CREEK NWR					8	0	30	44	44	0	0	1	2	0	0	0	0
peak				-	0	0	-	0	0	0	0	0	0	0	0	0	0
mo. avg.				0	0	0	0	0	0	0	0	0	0	0	0	0	0
3.L., S.C.				0	0	0	0	0	0	0	0	0	0	0	0	0	0
" , Br.L.				0	0	0	0	0	0	0	0	0	0	0	0	0	0

TABLE XVII

\*\*\*\* SCAUP

	September			October			November			December							
	8	15	22	29	6	13	20	27	3	10	17	24	1	8	15	22	29
LAKE ANDES NWR				0	40	40	4590	2040	7490	-	595	420	25	0			
VERMILLION AREA						0	6	0	40	0							
DE SOTO BEND NWR									0	1	3125	335	35	5	1	3	C
SQUAW CREEK NWR								150	150								
peak mo. avg.					18												
F.L., S.C.	0	0	0	0	0	0	-	6	2	175	24	150	0	1	-		
" , Br.L.	0	0	0	-	0	0	0	16	2	43		42	43	-			

TABLE XVIII

\*\*\*\* COMMON GOLDENEYE

	September			October			November			December							
	8	15	22	29	6	13	20	27	3	10	17	24	1	8	15	22	29
LAKE ANDES NWR							40	0	20	-	0	29	6	0			
VERMILLION AREA						0	7	0	0								
DE SOTO BEND NWR						0	1	0	0	0	50	9	13	4	5	0	:
SQUAW CREEK NWR																	
peak mo. avg.																	
F.L., S.C.	0	0	0	0	0	0	0	0	0	0	6	4	1	-			
" , Br.L.	0	0	0	-	0	0	0	0	0	0	6	4	1	-			

\*\*\*\* BUFFLEHEAD

TABLE XIX

	September			October			November			December							
	8	15	22	29	6	13	20	27	3	10	17	24	1	8	15	22	29
LAKE ANDES NWR					0	60	130	110	460	-	475	119	26	0			
VERMILLION AREA						0	3	0	7	0							
DE SOTO BEND NWR							0	1	0	0	30	6	5	0			
SQUAW CREEK NWR																	
peak mo. avg.	0	0	0	0	0	0	0	0	0	4	0	30	0	0	0	0	0
F.L., S.C.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
" , Br.L.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

\*\*\*\* RUDDY DUCK

TABLE XX

	September		October		November		December										
	8	15	22	29	6	13	20	27									
LAKE ANDES NWR	3470	2330	7170	13150	12040	22400	7100	6170	7920	1610	333	50	0	0	0	0	0
VERMILLION AREA																	
DE SOTO BEND NWR					0	1	0	24	0	7	7	80	12	0	0	2	1
SQUAW CREEK NWR																	
peak mo. avg.	0	0	0	0	40	0	0	400	400	0	0	0	0	0	0	0	0
F.L., S.C.	0	0	0	0	23	0	0	0	205	225	0	0	0	0	0	0	0
" , Br.L.	0	0	0	0	0	0	0	0	400	0	0	0	0	0	0	0	0
									4	8	34	8	3	3	3	3	3

TABLE XXI

\*\*\*\* HOODED MERGANSER

	September		October		November			December									
	8	15	22	29	7	13	20	27	3	10	17	24	1	8	15	22	29
LAKE ANDES NWR																	
VERMILLION AREA																	
DE SOTO BEND NWR									0	7	0	3	0	0	0	1	1
SQUAW CREEK NWR																	
peak																	
mo. avg.																	
F.L., S.C.																	
" , Br.L.																	

TABLE XXII

\*\*\*\* COMMON MERGANSER

	September		October		November			December									
	8	15	22	29	7	13	20	27	3	10	17	24	1	8	15	22	29
LAKE ANDES NWR																	
VERMILLION AREA																	
DE SOTO BEND NWR																	
SQUAW CREEK NWR																	
peak																	
mo. avg.																	
F.L., S.C.																	
" , Br.L.																	



\*\*\*\* KILLDEER

TABLE XXIII

	September		October			November			December								
	8	15	22	29	6	13	20	27	3	10	17	24	1	8	15	22	29
LAKE ANDES NWR Peak for first quarter 50 in Aug.						Peak for second quarter 50 in Oct.											
VERMILLION AREA			1	0	6	26	32	7	5	0							
DE SOTO BEND NWR						Peak for second quarter 25 in Oct.											
SQUAW CREEK NWR									150 (peak)								
peak									125	42	-	125	-	15	-		5
P.L., S.C.			30 (first)	33	0	-	0	1	0								
" , Br.L.			3	60													

\*\*\*\* COMMON SNIPES

TABLE XXIV

	September		October			November			December								
	8	15	22	29	6	13	20	27	3	10	17	24	1	8	15	22	29
LAKE ANDES NWR Peak for first quarter 200 in Sept.						Peak for second quarter 50 in Oct.											
VERMILLION AREA																	
DE SOTO BEND NWR																	
SQUAW CREEK NWR																	
peak																	
P.L., S.C.			25 (first)	1	0	-	0	119 (peak)	7	20	-	90	-	4	-		
" , Br.L.			0	1													

TABLE XXV

\*\*\*\* GREATER YELLOWLEGS

	September		October				November				December					
	8	15	22	29	6	13	20	27	3	10	17	24	1	8	15	22
LAKE ANDES NWR																
VERMILLION AREA	2	0	0	0	0	0	5	1	0							
DE SOTO BEND NWR																
SQUAW CREEK NWR																
peak	1 (first)		3 (peak)													
F.L., S.C.	12	18	2	0	0	-	-	-	7	4	-	1 (last)	-	0	-	-
" , Br.L.												0				

TABLE XXVI

\*\*\*\* LESSER YELLOWLEGS

	September		October		November		December	
	8	15	22	29	6	13	20	27
LAKE ANDES NWR								
Peak for first Quarter 300 in Sept.								
VERMILLION AREA	24	0	0	0	0	30	0	
DE SOTO BEND NWR								
SQUAW CREEK NWR								
peak	90 (first)	25	100 (peak)					
F.L., S.C.	25	600	0	0	0	-	-	-
" , Br.L.								

TABLE XXVII

\*\*\*\* PECTORAL SANDPIPER

	September		October				November			December								
	8	15	22	29	6	13	20	27	3	10	17	24	1	8	15	22	29	
LAKE ANDES NWR																		
VERMILLION AREA				0		0	14	10	0									
11			5															
DE SOTO BEND NWR																		
SQUAW CREEK NWR																		
100 (peak)																		
12 (first)																		
6			50															
1				0														
0																		
16 (last)																		
0																		
3																		
0																		
3																		
0																		
3																		
0																		
2																		
0																		
0																		

\*\*\*\*

LAKE ANDES NWR

VERMILLION AREA

DE SOTO BEND NWR

SQUAW CREEK NWR

peak  
mo. avg.  
F.L., S.C.  
" , Br.L.

TABLE XXVIII

\*\*\*\* AMERICAN GOLDEN PLOVER

	September	October	November	December
	8   15   22	29   6   13   20   27	3   10   17   24   1	8   15   22   29
LAKE ANDES NWR				
VERMILLION AREA				
DE SOTO BEND NWR				
SQUAW CREEK NWR			150	
peak	2 (first seen)			(last seen) 5
F.L., S.C.				
" , Br.L.				

TABLE XXIX

\*\*\*\* AMERICAN WOODCOCK

	September	October	November	December
	8   15   22	29   6   13   20   27	3   10   17   24   1	8   15   22   29
LAKE ANDES NWR				
VERMILLION AREA				
DE SOTO BEND NWR				
SQUAW CREEK NWR		1 (first & peak)	1 (last)	
peak				
F.L., S.C.				
" , Br.L.				

\*\*\*\* UPLAND FLYCATCHER

TABLE XXX

	September		October			November			December								
	8	15	22	29	6	13	20	27	3	10	17	24	1	8	15	22	29
LAKE ANDES NWR																	
VERMILLION AREA																	
DE SOTO BEND NWR																	
SQUAW CREEK NWR						10											
peak																	
mo. avg.																	
F.L., S.C.																	
" , Br.L.																	

\*\*\*\* SOLITARY SANDPIPER

TABLE XXXI

	September		October			November			December								
	8	15	22	29	6	13	20	27	3	10	17	24	1	8	15	22	29
LAKE ANDES NWR																	
VERMILLION AREA																	
DE SOTO BEND NWR																	
SQUAW CREEK NWR																	
peak																	
mo. avg.																	
F.L., S.C.																	
" , Br.L.																	

TABLE XXII

\*\*\*\* SPOTTED SANDPIPER

	September	October	November	December
	8 15 22 29	6 13 20 27	3 10 17 24 1	8 15 22 29
LAKE ANDES NWR				
VERMILLION AREA				
DE SOTO BEND NWR				
SQUAW CREEK NWR				
peak mo. avg. F.L., S.C. " , Br.L.				

TABLE XXXIII

\*\*\*\* BAIRD'S SANDPIPER

	September	October	November	December
	8 15 22 29	6 13 20 27	3 10 17 24 1	8 15 22 29
LAKE ANDES NWR				
VERMILLION AREA				
DE SOTO BEND NWR			20 (peak for second quarter of fiscal year)	
SQUAW CREEK NWR				
peak mo. avg. F.L., S.C. " , Br.L.				

\*\*\*\* LEAST SANDPIPER

	September		October			November			December								
	8	15	22	29	6	13	20	27	3	10	17	24	1	8	15	22	29
LAKE ANDES NWR																	
VERMILLION AREA																	
5																	
DE SOTO BEND NWR																	
SQUAW CREEK NWR																	
5 (first)							15	15 (last)									
"																	
"																	
Br.L.																	

\*\*\*\* DUNLIN

	September		October			November			December								
	8	15	22	29	6	13	20	27	3	10	17	24	1	8	15	22	29
LAKE ANDES NWR																	
VERMILLION AREA																	
DE SOTO BEND NWR																	
SQUAW CREEK NWR																	
peak																	
P.L., S.C.							4 (first & peak)	4 (last)	4 (last)	15	-	1	-	-	-	-	-
"						0	-	-	-	0	-	1	-	-	-	-	-
Br.L.																	

\*\*\*\* SHORT BILLED DOWITCHER

TABLE XXXVI

	September	October	November	December
	8 15 22 29	6 13 20 27	3 10 17 24	1 8 15 22 29
LAKE ANDES NWR				
VERMILLION AREA	1			
DE SOTO BEND NWR				
SQUAW CREEK NWR		60	10 (last)	
peak mo. avg. F.L., S.C. " " , Br.L.				

\*\*\*\* LONG BILLED DOWITCHER

TABLE XXXVII

	September	October	November	December
	8 15 22 29	6 13 20 27	3 10 17 24	1 8 15 22 29
LAKE ANDES NWR				
peak for first quarter 700 in Sept.		None	second quarter	
VERMILLION AREA				
DE SOTO BEND NWR				
SQUAW CREEK NWR		17 (first & peak)	1 (last)	
peak mo. avg. F.L., S.C. " " , Br.L.				



\*\*\*\*STILT SANDPIPER

TABLE XXVIII

	September			October			November			December							
	8	15	22	29	6	13	20	27	3	10	17	24	1	8	15	22	29
LAKE ANDES NWR																	
VERMILLION AREA																	
DE SOTO BEND NWR																	
SQUAW CREEK NWR			18			(first & peak)				8	(last)						
peak																	
mo. avg.																	
F.L., S.C.	26		200	0		0	-	-	-	0	-	0	-	-	0		
" , Br.L.																	

\*\*\* HUDSONIAN GODWIT

TABLE XXIX

	September			October			November			December							
	8	15	22	29	6	13	20	27	3	10	17	24	1	8	15	22	29
LAKE ANDES NWR																	
VERMILLION AREA																	
DE SOTO BEND NWR																	
SQUAW CREEK NWR							1	1									
peak							(first & peak)	(last)									
F.L., S.C.																	
" , Br.L.																	

\*\*\*\* AMERICAN AVOCET

TABLE XL

	September		October					November				December					
	8	15	22	29	6	13	20	27	3	10	17	24	1	8	15	22	29
LAKE ANDES NWR Peak for first Quarter 50 in Sept.							None in second quarter										
VERMILLION AREA																	
DE SOTO BEND NWR				0	4												
SQUAW CREEK NWR									1				(peak for second quarter)				
peak																	
mo. avg.																	
?, L., S.C.	2	1	0	0	4												
" , Br.L.																	

\*\*\*\* SEMI-PALMATED SANDPIPER

TABLE XLI

	September		October					November				December					
	8	15	22	29	6	13	20	27	3	10	17	24	1	8	15	22	29
LAKE ANDES NWR																	
VERMILLION AREA																	
DE SOTO BEND NWR																	
SQUAW CREEK NWR																	
peak																	
mo. avg.																	
?, L., S.C.	0	20	0	0	0												
" , Br.L.																	

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MISSOURI RIVER ENVIRONMENTAL INVENTORY VERTEBRATE  
SECTION: BIRDS BIRDS AL..(U) SOUTH DAKOTA UNIV  
VERMILLION DEPT OF BIOLOGY J LYNK 1973

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UNCLASSIFIED

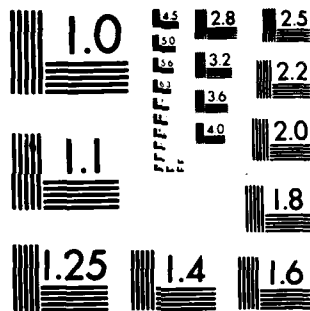
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MICROCOPY RESOLUTION TEST CHART  
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TABLE XLII

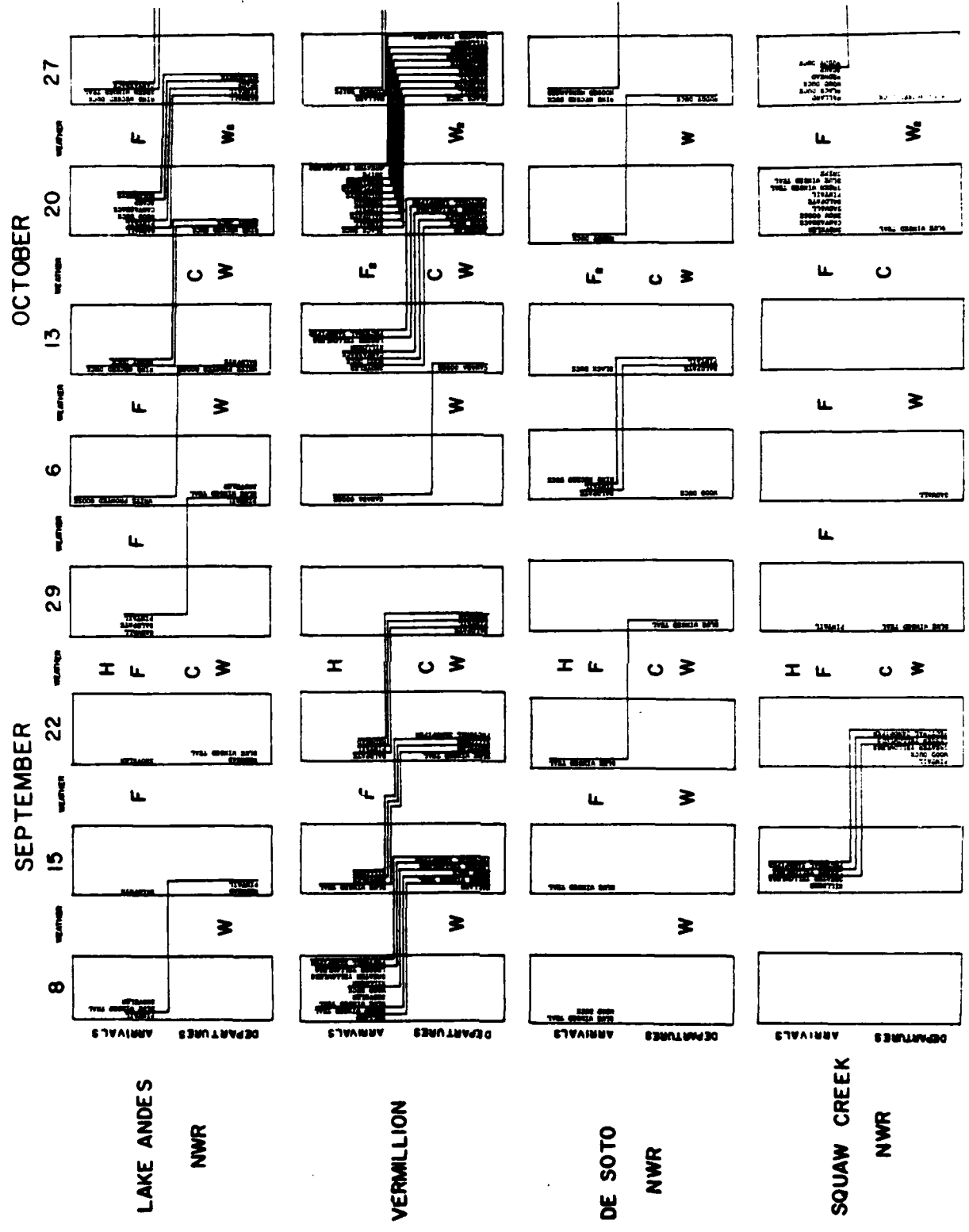
\*\*\*\* WILSON'S PHALAROPE

	September		October				November			December								
	8	15	22	29	6	13	20	27	3	10	17	24	1	8	15	22	29	
LAKE ANDES NWR																		
VERMILLION AREA				0	0	0	1	0										
DE SOTO BEND NWR																		
SQUAW CREEK NWR																		
peak																		
mo. avg.																		
? L., S.C.																		
" , Br.L.																		

\*\*\*\*

LAKE ANDES NWR																		
VERMILLION AREA																		
DE SOTO BEND NWR																		
SQUAW CREEK NWR																		
peak																		
mo. avg.																		
? L., S.C.																		
" , Br.L.																		

FIGURE 1



DECEMBER

NOVEMBER

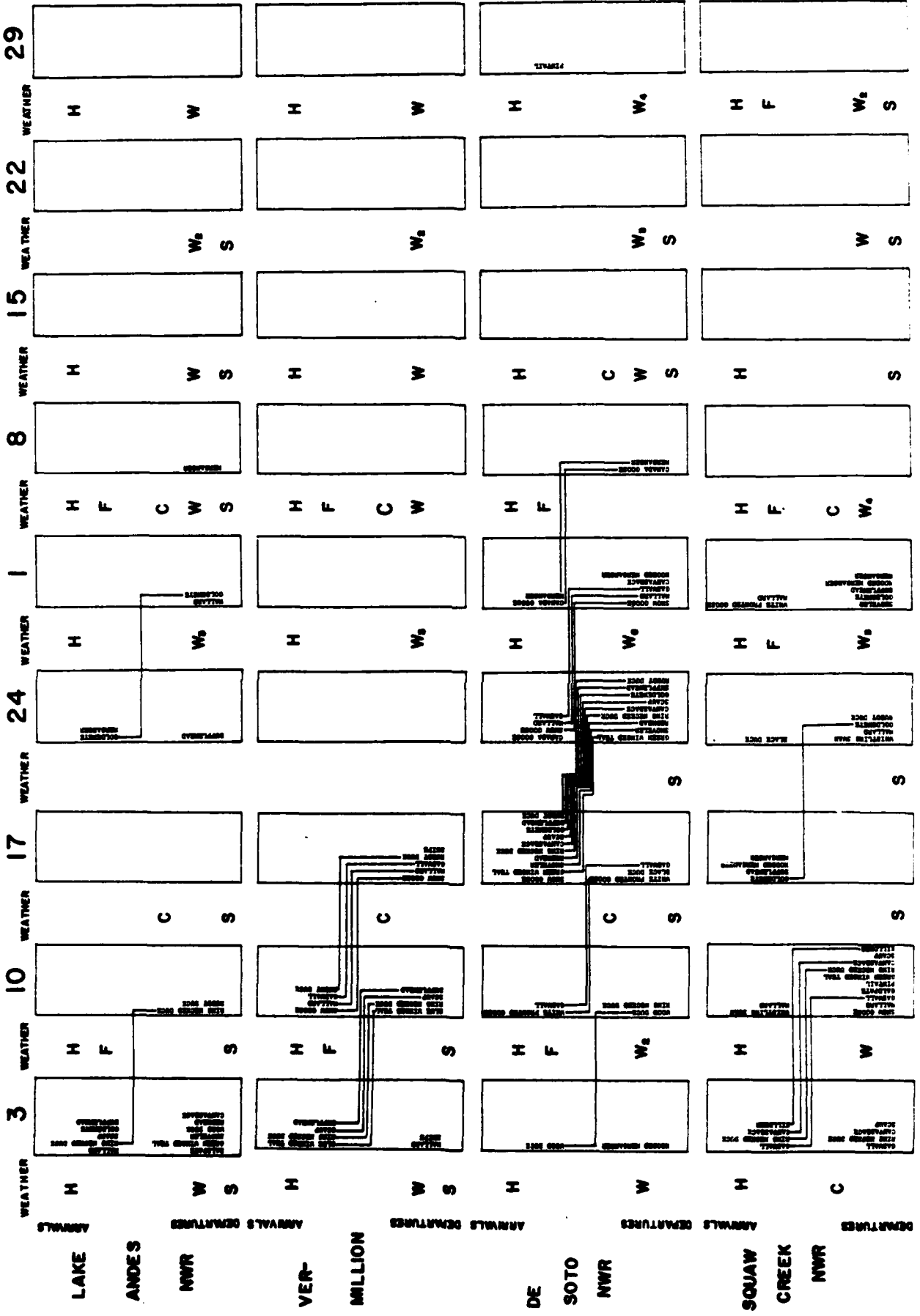


FIGURE 2

Figure 2.

Part D - General Conclusions: Potential Effects of  
Channelization on Birds in the Study Areas.

Since "bank stabilization reduces habitat diversity by increasing the physical stability of the substrate, thus preventing the formation of new habitats upon which young seral communities and their associated fauna depend for their existence" (Final Report of the Plant Section, M.R.E.I., p. 6), channelization must affect bird populations. Any bird which must have a seral community to breed will no longer breed in the study area (or will breed in greatly reduced numbers) after channelization. Marshes, sandbars, and poplar-willow communities have several local breeders now occupying them.

Marshes

Podicipedidae  
Eared Grebe  
Pied-billed Grebe  
Ardeidae  
Least Bittern  
American Bittern  
Anatidae  
Mallard  
Pintail  
Green-winged Teal  
Blue-winged Teal  
Shoveler  
Redhead  
Rallidae  
King Rail  
Virginia Rail  
Sora Rail  
American Coot  
Laridae  
Black Tern  
Troglodytidae  
Long-billed Marsh Wren  
Icteridae  
Yellow-headed Blackbird  
Red-winged Blackbird  
Fringillidae  
Swamp Sparrow

Sandbars

Charadriidae  
Piping Plover  
Laridae  
Least Tern

Poplar-Willow Communities

Parulidae  
Prothonotary Warbler  
Fringillidae  
Clay-colored Sparrow



It is also possible that channelization makes the river less attractive to the Bald Eagles which now winter in the unchannelized upper section. These birds are feeding on fish probably caught in the shallows and along the sandbars. A fast moving, muddy river would make their fishing more difficult if not impossible. These conditions probably account for their limited utilization of the portion already channelized.

There is also a difference in the utilization of channelized and unchannelized rivers by wintering waterfowl. Bean ("Winter Waterfowl Ecology in Yankton, Clay and Union Counties", South Dakota, University of South Dakota Master's thesis, 1973) found approximately 40,000 anatids in the u, channelized portion of this study area whereas there were essentially none using the channelized portion. It would seem probable that channelization to Yankton would eliminate most of this wintering population.

END